SITE HEALTH AND SAFETY PLAN

WILCOX OIL COMPANY

35146 E0810 ROAD

Bristow, OK 74010

Prepared for

U.S. Environmental Protection Agency - Region 6
1445 Ross Ave., Suite 1200
Dallas, TX 75202

Contract No.: EP-S4-16-04

Task Order 68HE0620F0018

Project No: WO6-18

January 25, 2021

Environmental Restoration LLC
1666 Fabick Drive
St. Louis, MO 63026

90127209

SITE HEALTH AND SAFETY PLAN

WILCOX OIL COMPANY

(b) (6) [redacted]

BRISTOW, OK 74010

I hereby certify that the enclosed Site Health and Safety Plan, shown and marked in this submittal, has been prepared in accordance with OSHA 29 CFR 1910 and is proposed to be incorporated with Contract: EP-S4-16-04 Task Order 68HE0620F0018. This Site Health and Safety Plan is submitted for Government acknowledgement

Mike Gipson Response Manager, ER	Date	918-397-5453 Phone Number
Matthew Salinger Program Manager, ER	1/25/2021 Date	713-502-6706 Phone Number
Gary Fanucchi Regional Health and Safety, ER	1/25/21 Date	720-440-3325 Phone Number
Katrina Higgins-Coltrain Remedial Project Manager, USEPA Region 6	Date	214-665-8143 Phone Number

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Attachments

LIST OF ACRONYMS AND ABBREVIATIONS

AHA	Activity Hazard Analysis
ANSI	American National Standards Institute
COC	contaminant of concern
CFR	Code of Federal Regulations
CIH	Certified Industrial Hygienist
CPR	Cardiopulmonary Resuscitation
CRZ	Contamination Reduction Zone
CSP	Certified Safety Professional
dBA	decibel A-weighted
ERRS	Emergency and Rapid Response Services
EZ	Exclusion Zone
HASP	Site Health and Safety Plan
HAZWOPER	Hazardous Waste Operation and Emergency Response
HSO	Site Health and Safety Officer
IDLH	immediately dangerous to life and health
kV	kilovolt
µg/kg	micrograms per kilogram
mg/kg	milligrams per kilogram
mg/m^3	Milligrams per cubic meter
MSDS	Material Safety Data Sheet
NFPA	National Fire Prevention Association
NIOSH	National Institute of Occupational, Safety and Health
NPL	National Priority List
OSHA	Occupational Safety and Health Administration
PM	Project Manager
RM	Response Manager
RPM	Regional Program Manager
PEL	Permissible Exposure Limit
PPE	personal protective equipment
ppm	parts per million
SDS	Safety Data Sheet
SCBA	self-contained breathing apparatus
SOP	Standard Operating Procedure
SOW	Scope of Work
USEPA	United States Environmental Protection Agency

1.0 Introduction and Site Entry Requirements

This document describes the health and safety guidelines developed, for the Wilcox Oil Company (Site), to protect on-site personnel, visitors, and the public from physical harm and exposure to hazardous materials or wastes. The procedures and guidelines contained herein were based upon the best available information at the time of the plan's preparation. Specific requirements will be revised when new information is received or conditions change. A written amendment will document all changes made to the plan. Any amendments to this plan will be included in Attachment A. Where appropriate, specific OSHA standards or other guidance will be cited and applied.

All work practices and procedures implemented on site must be designated to minimize worker contact with hazardous materials and to reduce the possibility of physical injury. All work will be performed in accordance with applicable Federal 29 CFR 1910 and 1926 health and safety regulations, specifically 29 CFR 1910.120 Hazardous Waste Operations and Emergency Response.

1.1 Daily Safety Meetings

Daily safety meetings will be held at the start of each shift. They are used to communicate daily activities, site conditions, hazards, and control measures, as well as to solicit input from site workers on safety concerns and improvements. The meetings may also be used to present safety training topics and refresher items.

1.2 Site Specific Training

The Response Manager shall be responsible for informing all individuals assigned to this project of the contents of this plan and ensuring that each person signs the Site Specific Training Record in Attachment Z. By signing the Site Specific Training Record, individuals are acknowledging they have received specified training on the potential hazards present on-site and the policies and procedures required to reduce the risk of exposure or adverse effects associated with these hazards.

1.3 Key Personnel

Project – Wilcox Oil Company	
Key Personnel	
Names and Titles	**Contact Information**
Katrina Higgins-Coltrain - RPM USEPA Region 6 Amber Howard - RPM USEPA Region 6	(Mobile) 214-665-8143 Email: coltrain.katrina@epa.gov (Mobile) 214-665-3172 Email: howard.amber@epa.gov
Matthew Salinger – Program Manager	(Mobile) 713-502-6706 Email: m.salinger@erllc.com
Mike Gipson – Response Manager Site Health and Safety Officer	(Mobile) 918-397-5453 Email: m.gipson@erllc.com
Gary Fanucchi – Project HS Manager	(Mobile) 720-440-3325 Email: g.fanucchi@erllc.com
Subcontractors	
Company	**Scope of Services**
N/A	N/A

2.0 Roles and Responsibilities

2.1 Program Manager (PM): Matthew Salinger

The Program Manager, will be involved with all contractual facets of the project beginning with the issuance of the Task Order through the final cost reconciliation and project close-out. The primary responsibility of the PM is ensuring that the USEPA is receiving quality service. This is achieved by monitoring RM decision-making, field activity, site progress, resource allocation, conflict resolution, and ultimately RPM satisfaction. This is done through communication with the RM, both formal (i.e. weekly progress calls, weekly progress reports) and informal (site visits, ad-hoc RM communications). The PM serves as a resource to the RM and assists in obtaining team resources, development of an operational approach, or procurement. The PM is responsible for ensuring that the RM has all needed resources to successfully complete the Task Order and subsequently will be involved with each phase of the project.

2.2 Site Response Manager (RM): Mike Gipson

The Site Response Manager, as the site representative for Site Contractors and subcontractors, has the overall responsibility for fulfilling the terms of the contract. The RM must oversee the project and ensure that all technical, regulatory and safety requirements are met.

The Site Foreman will be responsible for implementing the Safety and Health plan in the field daily. The FM will be working directly with the labor force and supervising the entire field task. The FM is responsible for ensuring that safe work procedures, equipment, and conditions are provided for and used by employees; as well as for communicating on hazards and protective measures.

2.3 Site Safety and Health Officer (SSHO):

The Site Safety and Health Officer will be assigned to the site on a full-time basis with functional responsibility for implementing the Site Safety and Health Plan as it applies to Site personnel.

Specific Duties Include:

- Assist RM in providing a safe and healthful work environment
- Assist RM in reporting and investigating all incidents
- Assist RM in documenting and correcting safety issues/concerns
- Complete AHA for specified job tasks
- Ensure site personnel meet required training and medical clearance
- Ensure proper decontamination of personnel and equipment is accomplished
- Ensure that air monitoring equipment is calibrated and operational
- Conduct personal air monitoring as required
- Perform respirator fit tests, as necessary
- Inventory and inspect PPE prior to personnel entries into exclusion zone
- Ensure proper personal protective equipment is being utilized
- Inspect first aid kits and fire extinguishers
- Supervise confined space entries
- Conduct and document routine site safety inspections

2.4 Project Safety and Health Manager: Gary Fanucchi

The Project Safety and Health Manager provides support and leadership to the project to protect the safety and health of the employees and the public. This includes, but is not limited to, communicating on safety and health issues, providing training, establishing special hazard control programs, assisting or conducting incident investigations, making inspections and surveys, evaluating or developing new protective measures, accumulating and distributing incident statistics, and identifying requirements of safety and health laws and regulations.

2.5 Competent Person Designation: Mike Gipson

The competent person is responsible for performing the pre and final work site inspection and completion of the AHA form, as well as performing regular and frequent site inspections to ensure that the activities are performed in compliance with the HASP.

2.6 Heavy Equipment Operators

The operators are responsible for safety in and around the equipment they are operating. They are to assure there are no children present in the immediate work zones. They are to know and follow the SSHP in proper care and operating of their equipment.

2.7 Dump and Passenger Truck Drivers

The truck drivers are responsible in keeping their trucks safe and operating them safely on the public roadways. It is the driver's responsibility to notify his/her immediate supervisor of safety issues with their vehicle.

2.8 Laborers:

The laborers are to assist all tasks on site to assure a safe working environment. Things such as directing traffic, making operators aware of other equipment locations, spotting vehicles as required and making any required changes to ensure a safe work environment.

2.9 Safety Observation Reporting

Any persons who observe safety problems should immediately report observations/concerns to appropriate key personnel listed in Section 2.1, 2.2 or 2.3 above.

3.0 Site Background and Scope of Work

3.1 Site Background

Wilcox Oil Company is a 140-150-acre site, that operated from the 1920s until 1963 and went through several expansions and mergers in that time. The site includes remnants of former oil refining operations and tank farms and can be divided into five major operational areas: Wilcox Process Area, Lorraine Process Area, East Tank Farm, North Tank Farm (NTF), and Loading Dock Area. An active railroad divides the two former process areas and product storage areas. A vacant church property and several residences are presently located within the boundaries of the site.

Magellan Pipeline Company, LP., operates a liquid pumping station in the northwest part of the East Tank Farm, as well as an active hazardous liquid pipeline that transects the East Tank Farm, Loading Dock Area, and North Tank Farm from the southeast to the northwest. Coordination with Magellan prior crossing or excavation near the pipeline is required. Magellan project manager is Teddy Galligher (918) 695-2206.

Previous investigations have identified the presence of petroleum contamination at eight former aboveground storage tank locations, and one sludge separation pit. The tanks and pits were bottomless and unlined, resulting in residual petroleum byproducts remaining following their demolition and removal from the Site. Oily, tar-like liquid is present at the surface or below a thin layer of soil, which migrates to the surface and spreads out when heated by the summer sun. The liquid and solid forms of the contamination are collectively referred to as tank waste source material, which is not classified as hazardous waste based on previous sampling results.

The lead additive area of the Wilcox Process Area is in the southwestern portion of the Site, adjacent to Sand Creek. The source material is located near the surface and contains high concentrations of lead. The areas with highest concentrations are devoid of vegetation and the surface appears bright white, in contrast to darker soils and thick vegetation throughout the rest of the site. The Pit 1 lead excavation area is in the central portion of the East Tank Farm area. The source material is located near surface. Laboratory analysis of the samples in

this area indicated the presence of actionable levels of lead reported in the subsurface soil at 6-inch (906 mg/kg) and 12-inch (5850 mg/kg) depths.

The lead additive area contains characteristically hazardous waste based on Toxicity Characteristic Leaching Procedure (TCLP) testing results, which indicate that lead leaches from the source material above Land Disposal Restriction criteria (40 CFR 268.34). Source material from the lead additive area will be treated through stabilization, which in this case, involves the addition and mixing of a reagent with the lead additive area source material at the site, prior to or immediately after excavation and before final loading and transport.

3.2 Scope of Work

The remedial design for this site includes the excavation and removal contaminated soils, and the restoration of the property. Anticipated site activities consist of the following:

1) Mobilize necessary personnel and equipment;
2) Setup support facilities / work zones;
3) Excavate identified grids to targeted depths as directed;
4) Manage and consolidate excavated soils for disposal;
5) Arrange transportation and disposal of impacted soils in accordance with CERCLA and DOT regulations;
6) Site restoration.
7) Demobilize personnel and equipment as necessary.

4.0 Hazard Assessment

This section is to be addressed in the daily tool box safety meeting as each task is to be initiated. Each Task-Specific Safety Assessment is designed to develop awareness to chemical and physical hazards specific to each task. It would be impractical to repeat in complete detail each control measure and SOP for each job task. Sources, Hazards and Control Measures will be addressed for each job task.

Specific work tasks with unique hazards and/or PPE requirements must be evaluated or reevaluated prior to beginning work. This task review will be led by the Response Manager and the HSO, and will include knowledgeable individuals such as the worker(s) and the supervisor. PPE requirements, based on this assessment, will be included in Section 6 of the HASP or in the AHA for the specific task. All workers must be trained in the requirements of the HASP and the applicable AHAs prior to beginning work. The required PPE may be changed by the HSO, based on the results of additional air monitoring, or on task-specific needs. Downgrades will require the approval of the Project Health and Safety Manager unless otherwise permissible by the HASP.

The following section outlines the Referenced Standard Operations Procedures (SOPs), Chemical Hazards and AHAs associated with this project. Applicable SOPs are available from ER's Health and Safety Database.

The AHAs should be revised for site-specific activities and reviewed with the work crew before commencing any activity.

The following table lists ER health and safety SOPs that are applicable to this project.

Referenced SOPs:	
ER SOPs applicable to this project or task order:	
HS-01 Air Monitoring and Sampling	HS-48 Lead Hazard Safety Program
HS-02 Blood Borne Pathogens Exposure Control Plan	HS-49 Tool Safety and Inspection
HS-04 Flammable Liquid Transfer (Bonding and Grounding)	HS-50 First Aid
	HS-51 Incident Reporting and Investigation
HS-05 Cold Stress	HS-52 General Waste Management
HS-08 Decontamination Measures	HS-53 Spill Prevention Response
HS-10 Motor Vehicle Operation	HS-54 Behavior Based Safety Program
HS-12 Electrical General	HS-55 Short Service Employee Program
HS-13 Excavation and Trenching Operations	HS-56 Stop Work Authority Program

Referenced SOPs:	
ER SOPs applicable to this project or task order:	
HS-15 Hazard Communication Program HS-16 Hearing Conservation HS-17 Heat Stress HS-18 Heavy Equipment Operation HS-24 Personal Protective Equipment HS-25 X-Ray Radiation Protection HS-26 Respiratory Protection Program HS-36 Proper Lifting Techniques HS-38 Fire Prevention Protection HS-39 Benzene Safety Guidelines	HS-57 Hazard Identification and Risk Assessment HS-58 Fatigue Management Program HS-59 Injury Illness Recordkeeping Program HS-62 Emergency Action Plan HS-63 Job Competency Program HS-64 Security Best Practices HS-73 Assured Grounding HS-81 Noise Awareness HS-85 Utility Locate Policy
UXO known or suspected to present? Yes ❑ No ☑	UXO support and plans provided Yes ❑ No ☑
Lifts Yes ☐ No ☒	
Items to be lifted: N/A	Critical ❑ Ordinary ❑
Excavations Yes ☑ No ❑	

4.1 Chemical Hazards

	Site Contaminants/Chemicals of Concern				
Chemical	**Media**	**PEL**	**REL**	**Route of Entry**	**Symptoms Acute/Chronic**
Benzene	Vapor	1.0 ppm TWA 5.0 ppm ST	0.1 ppm 1.0 ppm ST	inhalation, skin absorption, ingestion, skin and/or eye contact	irritation eyes, skin, nose, respiratory system; dizziness; headache, nausea, staggered gait; anorexia, lassitude (weakness, exhaustion); dermatitis; bone marrow depression; [potential occupational carcinogen]
CTPV-Coal Tar Pitch Volatiles	Vapor	0.2 mg/m^3 (benzene-soluble fraction)	Ca TWA 0.1 mg/m^3 (cyclohexane-extractable fraction)	inhalation, skin and/or eye contact	dermatitis, bronchitis, [potential occupational carcinogen]
Lead	Soil	0.050 mg/m^3	0.050 mg/m^3 (8hr)	inhalation, ingestion, skin and/or eye contact	lassitude (weakness, exhaustion), insomnia; facial pallor; anorexia, weight loss, malnutrition; constipation, abdominal pain, colic; anemia; gingival lead line; tremor; paralysis wrist, ankles; encephalopathy; kidney disease; irritation eyes; hypertension
Toluene	Vapor	200 ppm C 300 ppm 500 ppm (10-minute maximum peak)	100 ppm, 150ppm ST	inhalation, skin absorption, ingestion, skin and/or eye contact	irritation eyes, nose; lassitude (weakness, exhaustion), confusion, euphoria, dizziness, headache; dilated pupils, lacrimation (discharge of tears); anxiety, muscle fatigue, insomnia; paresthesia; dermatitis; liver, kidney damage
Xylene	Vapor	100 ppm,	100 ppm, 150ppm ST	inhalation, skin absorption, ingestion, skin and/or eye contact	irritation eyes, skin, nose, throat; dizziness, excitement, drowsiness, incoordination, staggering gait; corneal vacuolization; anorexia, nausea, vomiting, abdominal pain; dermatitis

The above listing should not be taken as a complete assessment of the hazards posed by materials at the Site removal. Therefore, personnel must be alert for symptoms of possible exposure. Symptoms must be immediately reported to the site supervisor. See Attachment C for Chemical Hazard Information and SDS.

4.2 Activity Specific Hazards and Controls

This section is to be addressed in the daily tool box safety meeting as each task is to be attempted. Each Task-Specific Safety Assessment is designed to develop awareness to chemical and physical hazards specific to each task. It would be impractical to repeat in complete detail each control measure and SOP for each job task. Sources, Hazards and

Control Measures will be addressed for each job task. Attachment D contains specific Activity Hazard Analysis, AHAs. AHA's should be reviewed / revised on site before activities commence.

4.3 General Hazards

Physical/Environmental Hazard Analysis		
Hazard	**Pre Planning to Control Hazard**	**Active Control Measures**
Electrical	1. Locate and mark existing energized lines. 2. De-energize lines if necessary to perform work safely. 3. All electrical circuits will be grounded. 4. All 120 volt single phase which are not a part of the permanent wiring will have a ground-fault interrupter in place. 5. Temporary wiring will be guarded, buried or isolated by elevation to prevent accidental contact by personnel or equipment. 6. Evaluate potential for high moisture/standing water areas and define special electrical wiring needs-typically requirement for low voltage lighting systems.	1. Utilize Qualified Electrical Contractor for any new or temporary electrical construction. 2. Ensure electrical equipment/material meet all local, state and federal code and specifications 3. Use GFCI for all power tool usage.
Ergonomic	1. All operations evaluated for ergonomic impact. 2. Procedures written to define limits of lifting, pulling, etc. 3. Procedures to define how personnel will utilize proper ergonomic concepts and utilize mechanical material handling equipment. 4. Necessary mechanical material handling equipment specified and ordered for project.	1. Proper body mechanics techniques stressed and enforced on a daily basis. 2. Mechanical handling equipment maintained and utilized. 3. Proper body mechanics stressed in scheduled safety meetings. 4. Injuries reported and medically treated if in doubt about severity. 5. Operations changed as necessary based on injury experience or potential.
Existing Site Topography	1. Survey site prior to layout. Identify areas unsafe for personnel or equipment due to physical conditions. 2. Identify/locate existing utilities. 3. Determine impact of site operations on surrounding properties, communities, etc. 4. Identify mechanized equipment routes both on site and onto and off the site. 5. Layout site into exclusion and contamination reduction zones based on initial site evaluation.	1. Awareness to work environment - regular inspection/audits to identify changing conditions. 2. Shut down operations when unknown conditions encountered.
Fires & Explosions	1. Evaluate all operations for fire and explosion potential. 2. Define specific procedures for unique operations presenting unusual hazard such as excavating near gas utilities. 3. Ensure that properly trained personnel and specialized equipment is available. 4. Define requirements for handling and storage of flammable liquids on site, need for hot work permits and procedures to follow in the event of fire or explosion. 5. Define the type and quantity of fire suppression equipment needed on site. 6. Coordinate which local firefighting agencies to discuss unique fire hazards, hazardous materials, etc. 7. Ensure site operations comply with 29CFR 1910.157G.	1. Inspect fire suppression equipment on a regular basis. 2. Store flammables away from oxidizers and corrosives. 3. Follow any site specific procedures regarding work around flammables. 4. Review and practice contingency plans. 5. Discuss on regular basis at scheduled safety meetings.
Flammable Vapor and Gases	1. Evaluate site to determine sources of likely flammable gas or vapor generation. 2. Develop specific procedures to be followed in the event of exposure to flammables. 3. Specify specialized equipment needs for inerting flammable atmospheres, ventilating spaces and monitoring flammable vapor concentrations. 4. Define requirements for intrinsically safe equipment. 5. Develop contingency plan to follow in the event of fire or explosion.	1. Calibrated monitoring equipment available and utilized by trained personnel whenever working where flammable gas or vapor is present. 2. Monitoring performed at regular frequency and in all areas where vapor could generate or pool. 3. Equipment and operations shut down when threshold levels are exceeded. 4. Contingency plans reviewed regularly by all involved personnel. 5. Work areas are carefully inspected to look for possible ignition sources. Sources are removed. 6. Operations shut down if specific task procedures can't be followed to the letter.

Physical/Environmental Hazard Analysis		
Hazard	**Pre Planning to Control Hazard**	**Active Control Measures**
Heavy Equipment Operation	1. Define equipment routes and traffic patterns for site. 2. Insure that operators are properly trained on equipment operation for all equipment required on project. 3. Define safety equipment requirements, including back up alarm and roll over, for all equipment on site. 4. Define equipment routes and traffic patterns for site. 5. Implement SOP of requiring operators to safety inspect equipment on a daily basis in accordance with manufacturer requirements. 6. Evaluate project requirements to ensure that equipment of adequate capacity is specified.	1. Equipment inspected as required. 2. Equipment repaired or taken out of service. 3. Ground spotters are assigned to work with equipment operators. 4. Utilize standard hand signals and communication protocols. 5. Personnel wear the proper PPE; utilize hearing protection, gloves for handling rigging, etc. 6. Equipment safety procedures discussed at daily scheduled safety meetings. 7. Personnel do not exceed lifting capacities, load limits, etc. for equipment in question. 8. Personnel follow basic SOP's which prohibit passengers on equipment, activating brakes and grounding buckets, securing loads prior to movement, etc.
Illumination	1. Evaluate all operations and work areas to determine lighting requirements. 2. Specify specialized lighting requirements including explosion proof, intrinsically safe, lighting needs. 3. Determine if nighttime outdoor operations are necessary. 4. Evaluate tasks to be performed and number of light plants necessary to allow operations. 5. Ascertain if outdoor lighting from nighttime operations will have an impact on surrounding communities.	1. Inspect specialized equipment and discard or replace as needed. 2. Add additional lighting to areas with lighting deficiencies. 3. Inspect drop cords and portable lights on regular basis. Replace or repair as necessary.
Noise	1. Local community noise standards examined. 2. Expected loud operations evaluated to determine compliance with community standards. 3. Loud operations scheduled for approved time periods. 4. Noise level standards established for equipment brought onto site. 5. Hearing protection requirements defined for personnel expected to have excessive exposures.	1. Personnel receive annual audiogram. 2. Personnel required to wear hearing protection. 3. Routine noise level monitoring and dosimetry performed. 4. Defective equipment repaired as needed. 5. Ongoing hearing conservation education promoted at scheduled safety meetings. 6. Medical evaluation following noise (impact) exposure if symptoms present themselves.
Personal Injuries	1. Site operations will be evaluated for exposures with serious injury potential such as falling objects, pinch points, flying objects, falls from elevated surfaces, etc. 2. A written Fall Prevention Program will be developed if workers will be required to work at heights greater than 6 feet from unguarded work locations. 3. PPE requirements will be based on potential for injury.	1. Personnel will wear required PPE. 2. Specialized equipment such as rope grabs, winches, etc. will be inspected prior to each use. 3. Defective equipment will be immediately replaced. 4. All injury and near miss incidents will be reported to the SHSO. 5. First aid/CPR trained person on site at all times. 6. First aid on site. 7. Transport for medical care if necessary.
Small Equipment Usage	1. Site operations will be evaluated to determine need for specialized intrinsically safe, explosion-proof and UL approved equipment and instruments. 2. Implement requirement for G.F.I., double insulated tool usage, or assured grounding program in all outdoor operations, will be utilized. 3. Specify equipment needs to ensure that equipment used only for the purpose for which it is designed and to prevent abuse or misuse of the equipment. 4. Specify requirements for the inspections and maintenance of specialized equipment. 5. Specify that all equipment utilized on the project meets all OSHA requirements.	1. Inspect each tool prior to each use. 2. Ensure all guards are in use and properly positioned. 3. Ensure item being worked on is properly braced if necessary. 4. Get help when appropriate to hold or brace item being worked on. 5. Wear leather or other appropriate gloves in addition to level C PPE.

Physical/Environmental Hazard Analysis		
Hazard	**Pre Planning to Control Hazard**	**Active Control Measures**
Weather Conditions	1. Evaluate prevailing weather conditions for the site. 2. Contingency plans developed for likely severe weather conditions such as tornado, and extreme thunderstorm. 3. Provide for daily weather forecast service in extreme weather areas. 4. Plan to weatherize safety systems, such as showers and eye washes that would be impacted by extreme cold weather. 5. Order necessary specialized cold weather clothing. 6. Grounding and bonding requirements defined for thunderstorm areas. 7. Sheltered air conditioned break areas provided for extreme hot and cold weather zones.	1. Employees trained in contingency plan for severe weather conditions. 2. Emergency water sources inspected regularly in cold areas. 3. Weather service contacted regularly during storm conditions. 4. Supervisory personnel cease operations during extreme storm conditions (i.e., thunderstorms). 5. Personnel evacuate to safe assembly area.
Heat Stress	1. Anticipate possible high temperatures (summer months). 2. Be aware of heat stress symptoms, quit sweating, pale, clammy skin, dizziness	1. Cool break area. 2. Drink water. 3. Buddy system/ awareness 4. First aid on site. 5. Medical care if symptoms persist.
Cold Stress	1. Anticipate possible low temperatures (winter months). 2. Remember the temperature does not have to be below freezing to have a cold stress situation.	1. Warm break area. 2. Warm decaffeinated drinks. 3. Buddy system/ awareness. 4. First aid on site. 5. Medical care if symptoms persist

4.4 Special Hazards (COVID19)

Background

The world health community continues to monitor closely the emergence of the SARS-CoV-2 virus and the disease it causes, named “coronavirus disease 2019” (COVID-19). At this time, no one knows how severe this outbreak will be. Given this uncertainty, and the fact that the seasonal influenza (flu) virus is also widespread, we are taking proactive steps to address business concerns. First and foremost, we want to maintain a safe workplace and encourage and/or adopt practices protecting the health of employees, customers, visitors, or others. We also want to ensure the continuity of business operations during this pandemic.

This guidance plan is provided as general rules, procedures for ER employees to follow and will be updated frequently as new documentation and information is forthcoming for all available resources. ER’s goal, at a minimum, is to follow guidance and recommendations provided by the Centers for Disease Control and Prevention (CDC), found here; https://www.cdc.gov/coronavirus/2019-ncov/index.html,

General

ER will be flexible in the application of our policies and procedures as they relate to working from home, and time off. Our overarching concern is for everyone’s health and safety during the ongoing COVID-19 pandemic.

It is critical that employees do not report to work while they are experiencing respiratory symptoms such as fever, cough, and shortness of breath. Currently, the CDC recommends that employees remain at home until at least 24 hours after they are free of fever (100 degrees F) or signs of a fever without the use of fever-reducing medications. Many times, with the best of intentions, employees report to work even though they feel ill.

ER will provide hand sanitizers throughout the workplace and in common areas. Cleaning sprays and wipes are also provided to clean and disinfect frequently touched objects and surfaces such as telephones and keyboards.

Communication

Employees are encouraged to use telephone and email instead of face-to-face meetings as much as possible during this outbreak.

Regarding jobsite or office illnesses and how they should be handled. Be aware that the situation is currently very fluid, and this guidance can change at any time. Emails will be provided on any changes.

Please avoid talking about co-workers who may be sick. Do not spread rumors regarding co-workers who may be sick. If an employee is confirmed to have COVID-19 we will notify all fellow co-workers of their possible exposure to COVID-19, but we will endeavor to maintain confidentiality as required by the Americans with Disabilities Act (ADA), and The Health Insurance Portability and Accountability Act (HIPAA) regulations, even though ER is not a HIPPA covered entity.

Points of Contact

Mark Ruck and Jim Davis are the points of contact for Human Resource and Operational decisions in relation to COVID-19 and other suspected Illnesses. You are to immediately notify both Mark Ruck and Jim Davis if you or one of your employees shows symptoms of COVID-19 at the following contact numbers;

Mark Ruck: 636-795-8351
Jim Davis: 314-616-0824

- Those symptoms from the CDC are listed below:
    - Fever or chills
    - Cough
    - Shortness of breath or difficulty breathing
    - Fatigue
    - Muscle or body aches
    - Headache
    - New loss of taste or smell
    - Sore throat
    - Congestion or runny nose
    - Nausea or vomiting
    - Diarrhea

This list does not include all possible symptoms. CDC will continue to update this list as we learn more about COVID-19.

ER will follow the CDC guidelines regarding the next steps. Please print this and post it in a common area for everyone to read, and please cover this information in your daily safety meetings.Close Contact
Effective immediately, if you have had close contact (defined as being within 6ft for a cumulative time of 15 minutes or more over a 24 period) to someone with a confirmed case of COVID-19 you need to call our COVID reporting hot line (636) 680-8152 and leave a detailed message, including a call back number. You can also send an email to COVID@erllc.com to report close contact. A representative of Human Resources will contact you upon review of your submittal.

COVID-19 Symptoms
Also effective immediately, if you are experiencing any of the CDC listed symptoms, you need to either call our COVID reporting hot line **(636) 680-8152** and leave a detailed message, including a call back number or send an email to COVID@erllc.com to report your symptoms A representative from Human Resources will contact you upon review of your submittal.

CDC website regarding the COVID-19 virus is the definitive source for information about COVID-19. https://www.cdc.gov/coronavirus/2019-ncov/index.html

- Continue to use social distancing-staying 6 feet away from others
- Continue to use good hygiene practices. Wash your hands frequently. Do not touch your face. Disinfect high touch areas frequently
- Cough and sneeze into a tissue or your elbow
- Follow all State and Local restrictions that are being put in place

ER will follow the CDC guidelines regarding the next steps. Please print this and post it in a common area for everyone to read, and please cover this information in your daily safety meetings.

TRAVEL

In addition, ER is limiting any business travel other than what is absolutely necessary. Necessary travel would include mobilization and demobilization of projects. It does not include travel for client meetings or visiting other ER offices. If you have any questions as to whether or not your planned travel is necessary, please contact your direct supervisor. If you are planning a personal trip, please consult the CDC web page for travelers this guidance is located here; **https://www.cdc.gov/coronavirus/2019-ncov/travelers/index.html**

Some counties and states have issued 'shelter in place' orders or require non-essential businesses to close their physical locations. Under the Department of Homeland Security, our business of providing HAZMAT emergency response is considered an essential service under the Emergency Services sector. We anticipate that we will continue our operations in normal fashion, and these orders do not apply to ER.

Vehicle Transportation

When traveling with more than one person in a vehicle, expected best management practices are as follows:

- Keep vehicle windows open when possible, AND all parties must wear a mask/face covering
- Increase ventilation by using fresh air setting on climate control system
- Regularly disinfect high touch surfaces, [i.e. steering wheels, door handles, etc.]

PREVENTIVE MEASURES

We ask all employees to cooperate in taking steps to reduce the transmission of communicable diseases in the workplace. Employees are reminded of the following:

- Stay home when you are feeling ill and experiencing COVID-19 symptoms
- Please respect the social distancing rules and maintain at least 6 feet from coworkers. This means that you should not congregate in groups in areas such as near copiers, kitchens, or in other employee's offices
- Wear face covering/mask while in common areas of all of our offices and jobsite offices, including shops / warehouses
  -Face coverings / masks / neck gaiters must be multi-layer construction
- Wash your hands frequently with soap and water for at least 20 seconds
- Be aware of commonly handled items (clipboards, pens, paper, etc.) and sanitize hands after handling
- Please continue to use good hygiene. Cover your mouth and nose if you cough or sneeze. If you do not have a tissue available, cough or sneeze into your elbow
- Only ER employees will be allowed in ER offices. This means no visitors, no salespeople, no family members. Only Mark Ruck can authorize exception to this requirement. The only non-employees that will be allowed will be for the delivery. If you order food, you will need to meet the delivery person at the door
- Avoid touching your face and mask
- Disinfect high touch areas frequently
- Minimize trips to public places (i.e. groceries, medications, etc.)
- Avoid people who are sick with respiratory symptoms

When not to report to Work

- You are experiencing symptoms of COVID-19 as described above. This applies even if you think the symptoms are associated with your allergies
- Exposure to or close contact with someone diagnosed with COVID-19. Close contact is defined as having been within 6 feet of infected person for at least 15 minutes or being exposed to their cough or sneeze.
- A Public Health Official said you were potentially exposed to COVID-19

OFFICE

ER will be implementing the CDC recommendations for social distancing, which requires everyone to keep at 6 feet between each other. Due to the fact that this is not always possible, ER will require the use of a face coverings/masks while in common areas of all of our offices and jobsite offices. This includes warehouse and shop areas of the offices. ER will supply masks/face covers to each office for those people who do not already have a face cover.

What does this mean?

- Wear a mask in common areas of the office. This means if you leave your office/workspace, you need to wear a mask.
  - A trip to the restroom, wear a mask
  - Need to go to the copier, wear a mask
  - Going down the hall to ask a question of a co-worker, wear a mask
  - Headed to the kitchen for a cup of coffee, wear a mask
- If you are in your office/workspace, masks are not necessary
- This includes jobsite trailers if workspaces are not at least 6 feet apart
- This includes warehouse and shop areas of the office

We will be flexible in meeting the needs of others who may need to work from home as a result of the schools closing, and the uncertainty of future day care options. Please consider if gathering in the conference room for call is really necessary. Consider having people call in from their office and use other online tools that we have available.

When working in your office, please take a few minutes upon arrival to thoroughly disinfect your offices. After this initial disinfecting, disinfect high touch items a few times throughout the day.

PROJECT SITES

Similar to offices, ER will implement the CDC recommendations for social distancing and mask use. Site controls to limit outside visitors, including deliveries must be established.
What does this mean?

1) Restrict meetings, safety meetings / tailgate talks, and gatherings to as few attendees as possible and hold them in an outdoor environment if possible
2) Establish effective social distancing protocols, which ensure that staff maintain a minimum 6-foot separation from other staff during meetings, discussions, etc. Ensure that distancing and / or face covering protocols are maintained during operation of mobile service equipment designed for 2 or more passengers including, but not limited to, man lifts, scissors lifts, etc.
3) Establish site entry controls to prevent unauthorized personnel from entering site. Post signage as appropriate to notify site entry requirements.
4) Provide sanitation and cleaning supplies for addressing common surfaces in multiple user mobile equipment and multiple user tooling
5) Maintain cleanliness of commonly handled items (clipboards, pens, paper, etc.) and sanitize hands after use
6) Maintain 6-foot separation protocols for labor transportation services, such as buses, vans, etc.
7) Conduct daily surveys of changes to staff / labor health conditions.
8) Ensure that any identified first responders in the labor force are provided and use the needed Personal Protective Equipment (PPE) and equipment for protection from communicable or infections disease. (29 CFR 1910.1030)
9) Provide access to potable and sanitary water (29 CFR 1926.15)

Refer to Guidance on Preparing Workplaces for COVID-19, OSHA 3990-03 2020. **https://www.osha.gov/Publications/OSHA3990.pdf?utm_medium=email&utm_source=govdelivery** for guidance on addressing the above listed items.

In the event that an employee gets sick while working away from home, we will have them self-quarantine in their hotel room. ER will contact 1Source to assist in providing medical advice, and direction on employees return to work. ER will pay the employee the $35/day per diem. Eligible employees are entitled to up to 80 hours of paid sick leave due to

COVID-19 related lost wages. If you believe you are eligible for COVID related sick pay, contact Laura Collins. ER will follow applicable local laws and regulations, if there are any in place in the event of quarantining. We will make case by case decisions on how to proceed as the illness unfolds.

INCIDENTS OF NATIONAL SIGNIFICANCE

These actions are typically administered by FEMA, follow the ICS structure, and require many resources both personnel and equipment. ER will adhere to the same policies and procedures established by the CDC and ER policies. Additional Guidelines used during events of this nature include;

- Functional Groups/Span of Control - the ICS specifies 1 supervisor to 6 personnel. Health and safety meetings will be held by each functional group with social distancing in effect.
- Hand and Eye wash stations - each functional group will have hand and eye wash stations
- PPE - each functional group will have enough proper PPE staged at their specific location for days specified for each task element.
- First Aid - each functional group will have at minimum 2 first aid / CPR trained personnel on their team to assess and administer minor first aid ailments.
- Decontamination - will be administered per ER policy and procedure
- Health and Safety Officer (HSO) - depending on the number of personnel responding, at minimum 1 HSO will be on location assessing and administering health and safety requirements in accordance with regulatory standards.

COMPENSATION

ER will provide PTO and other benefits to compensate employees who are unable to work due to illness. Paid sick leave laws are currently being discussed at state and federal levels, ER will follow applicable laws if there are any in place in the event of quarantining or illness. **Employees who report to work ill will be sent home in accordance with these health guidelines.**

Families First Coronavirus Response Act. The provisions of this Act include paid sick leave for up to 80 hours for those individuals who have been impacted by the COVID-19 virus, and updated provisions to the Family Leave Medical Act (FMLA) that can provide paid leave under FMLA. The new law became effective on April 2, 2020. At this time, we are reviewing the new law and its provisions, as our goal is to do everything, we can to try to protect our workers and ensure we all remain healthy when things return to normal.

RETURN TO WORK

In general, an employee that is sick can return to the site once their healthcare provider and/or 1Source has cleared them to return for duty. 1Source will be utilized to provide employee screening and return to work guidance. ER will follow RTW protocol established by 1Source and the CDC for both symptomatic employees with suspected or confirmed COVID-19 and asymptomatic employees with laboratory-confirmed COVID-19.

The following CDC based protocol shall be followed for employee return to work:

Symptomatic employee with suspected or confirmed COVID-19
(either strategy is acceptable depending on local circumstances)

1) Symptom based strategy. Exclude from work until
   - At least 1 day (24 hours) have passed since recovery defined as resolution of fever without the use of fever reducing medications and improvement in respiratory symptoms (e.g., cough, shortness of breath); and,
   - At least 10 days have passed since symptoms first appeared
2) Test-based strategy. Exclude from work until
   - Resolution of fever without the use of fever-reducing medication
   - Improvement in symptoms (e.g., cough, shortness of breath), and
   - Negative results of an FDA Emergency Use Authorized molecular assay for COVID-19 from at least two consecutive respiratory specimens collected ≥24 hours apart (total of two negative specimens)

Employee with laboratory-confirmed COVID-19 who have not had any symptoms
(either strategy is acceptable depending on local circumstances)

1) Time-based strategy. Exclude from work until
   - days have passed since the date of their first positive COVID-19 diagnostic test assuming they have not subsequently developed symptoms since their positive test. If they develop symptoms, then the symptom-based or test-based strategy should be used. Note because symptoms cannot be used to gauge where these individuals are in the course of their illness, it is possible that the duration of viral shedding could be longer or shorter than 10 days after their first positive test.

2) Test-based strategy. Exclude from work until
   - Negative results of an FDA Emergency Use Authorized COVID-19 molecular assay for detection of SARS-CoV-2 RNA from at least two consecutive respiratory specimens collected ≥24 hours apart (total of two negative specimens). Note, because of the absence of symptoms, it is not possible to gauge where these individuals are in the course of their illness. There have been reports of prolonged detection of RNA without direct correlation to viral culture.

4.4 Biological Hazards

Biological hazards that may be found on site include hazardous plants, venomous snakes, other wild animals, dogs, stinging / biting insects, and spiders. Depending on the season and weather, the hazards vary. For instance, during cold weather many animals and insects are not active and most plants are dormant. Employee awareness and the safe work practices outlined in the following paragraphs should reduce the risk associated with these hazards.

Hazardous Plants

Day to day operations may bring employees into contact with a variety of hazardous plants. The ailments associated with these plants range from mild hay fever to contact dermatitis, to carcinogenic affects. However, the plants which present the greatest degree of risk to site personnel are those which produce skin reactions and skin and tissue injury.

Three of the many poisonous plants that can produce either an allergic contact dermatitis or an irritant contact dermatitis include:

Poison Ivy (Toxicodendron radicans) listed by the USDA;
Poison Oak (Toxicodendron toxocarium) listed by the US Forest Service.
Poison Sumac (Toxicodendron vernix) listed by the USDA

Prevention of dermatitis includes:

- Avoid contact with any poisonous plants on site, and keep a steady watch to identify, report and mark poisonous plants found on site;
- Wash hands, face or other exposed areas at the beginning of each break period and at the end of each work day;
- Avoid contact with, and wash on a daily basis, contaminated tools, equipment and clothing;
- Barrier creams, water based sunscreens, detoxification/wash solutions and orally administered desensitization may prove effective and should be tried to find the best, preventative solution.


Poison Ivy


Poison Oak


Poison Sumac

Venomous Snakes

Water Moccasin

There is only one North American poisonous water snake - the Cottonmouth Water Moccasin. Not to be confused at all with its many nonpoisonous neighbors, this snake is a pit viper in the same general family as the Copperhead and the Rattlesnake.

They favor lying dormant on logs, rocks or limbs at water's edge awaiting the telltale movement of approaching prey. It is characterized by a brown, olive or blackish dark body with lighter belly, and body crossbands which have a distinct border extending all the way around and across the yellowish stomach

Copperhead

The copperhead is a small hemotoxic reptile classed closely with the water moccasin. The Broad-Banded subspecies is found in western/central Texas, Oklahoma, Missouri, and Kansas living in both lowlands and hilly areas. It is characterized by the rich "new penny" copper colors with wide alternating bands that extend completely around even the underside.

Rattlesnake

The rattlesnakes listed in Oklahoma; Prairie, Timber Western Diamondback, Western Pygmy, and Western Massasauga.

The prairie rattlesnake has dark brown blotches along its back that may be oval, squarish, or hexagonal in shape. The belly has no pattern and is a white or gray color, and it has gray bands that ring the end of the tail just before the rattle. This snake has keeled scales, a vertical pupil (not round), and an obvious heat-sensing pit between the eye and nostril. They can grow to 46 inches, and can be found in grasslands, rocky outcrops and near prairie dog towns. This snake can be aggressive, and quick to defend itself if threatened (oksnakes.org).

Prairie Rattlesnake

The timber rattlesnakes are usually found in two colors during their life span. Initially they are found in light yellow or grey color, which is called the light stage. In this situation, the background is decorated with v shaped black or dark brown color bands. The next stage is the dark stage where the yellow portion is decorated with thick black or dark brown bands that go across.

Timber Rattlesnake

The western diamondback is the largest of the western rattlesnakes, it is identified by the dark diamonds outlined in white on its back. Black and white bands ring the end of the tail just before the rattle. It is found in dry areas across the western states, mountains, prairies, and rocky canyons(oksnakes.org)

Western Diamondback

The western pygmy rattlesnake is a small, colorful rattlesnake with a slender tail and tiny rattle. General color is light brownish gray, with a row of small, dark brown spots on the back and similar spots on each side. Most specimens also have a rust-colored stripe down the back. The belly is usually gray or dusky cream-colored, with numerous irregularly spaced bars. The head has a distinct black stripe that angles from the eye to the corner of the mouth, and a sensory pit located between each nostril and eye. The tail is thin and has a tiny rattle. Like other venomous snakes, they have “pits” on the sides of their heads, and the pupils are diamond-shaped in daylight (not round)

Western Pygmy Rattlesnake

The western massasauga is a medium-sized, dark rattlesnake with a short, thick body. General coloration is light gray to dark gray, with rows of dark to light brown blotches down the middle of the back and along both sides. The belly is generally light colored. The head is a thick diamond shape with dark stripes extending back from the eyes. The tail has a stubby rattle. Like other venomous snakes, they have “pits” on the sides of their heads, and the pupils are diamond-shaped (not round).

Massasauga Rattlesnake

Most species of rattlesnakes have hemotoxic venom, destroying tissue, degenerating organs and causing coagulopathy (disrupted blood clotting). Some degree of permanent scarring is very likely in the event of a venomous bite, even with prompt, effective treatment, and a severe envenomation, combined with delayed or ineffective treatment, can lead to the loss of a limb or death. Untreated rattlesnake bites, especially from larger species, can be fatal.

Leave wild animals alone. Be aware of peak movement times. Reptiles are most active in the warmer months of April through October. During the hottest months, they will be most active at night. They may be encountered during the day in spring and fall or during a warm day in winter.

Use caution where you put your hands and feet. Try to keep your hands and feet out of crevices in rocks, wood piles and deep grass.

Dead snakes can bite. Never handle a venomous reptile, even after its dead. Reflex strikes with injected venom can occur for several hours after death.

If a bite occurs, the amount of venom injected cannot be gauged easily. Symptoms and swelling may occur within minutes and potentially become life-threatening rapidly, but in some cases hours may pass before serious effects appear.

Quick medical attention is critical. Keep the area of the bite below the level of the heart. It is important to keep a snake bite victims calm to avoid elevating their heart rate and accelerating the circulation of venom within their bodies.

Dogs and Other Animals

Do not approach or try to pet dogs or wild animals. Do not feed animals.

Normally, wildlife will avoid people and areas where activities are ongoing. Small animals, such as raccoons / skunks, infected with rabies or when cornered, may become aggressive. When working, remain alert for likely locations that animals inhabit. Avoid nests, dens, and holes in the ground that may be the animal's home. If bitten by an animal, seek medical attention immediately. Do not try to capture the animal, you may only get other personnel bitten.

Insects and Spiders

Biting Insects

Many types of biting insects such as mosquitoes, flies and fleas may be encountered on site. The use of insect repellents will be encouraged by the SSO if deemed necessary. The biting insects of greatest concern are spiders, especially the black widow and the brown recluse. These spiders are of special concern due to the significant adverse health effects that can be caused by their bite.

Mosquitoes: West Nile is a mosquito borne, viral disease. The principle symptoms of West Nile are:

High fever and at least two of the following:

- Severe headache
- Vomiting
- Joint pain
- Rash
- diarrhea
- fatigue and weakness

The best way to reduce mosquitoes is to eliminate the places where the mosquito lays her eggs, like artificial containers that hold water in and around the home. Outdoors, clean water containers like pet and animal watering containers, flower planter dishes or cover water storage barrels. Look for standing water indoors such as in vases with fresh flowers and clean at least once a week.

The adult mosquitoes like to bite inside as well as around homes, during the day and at night when the lights are on. To protect yourself, use repellent on your skin while indoors or out. When possible, wear long sleeves and

pants for additional protection. Also, make sure window and door screens are secure and without holes. If available, use air-conditioning.

To avoid mosquito bites, apply insect repellent containing DEET when outdoors and wear long-sleeved clothes and long pants during peak mosquito feeding hours (dusk until dawn). The length of time DEET is effective is related to the concentration of DEET. Use 100% DEET for all day protection. Also, eliminating standing water sources around the jobsite will prevent mosquitoes from nesting.

Ticks:

The Center for Disease Control (CDC) has noted the increase of Lyme disease and Rocky Mountain Spotted Fever (RMSF) caused by bites from infected ticks that live in and near wooded areas, tall grass, and brush. Ticks are small, ranging from the size of a comma up to about one quarter inch. They are sometimes difficult to see. The tick, season extends from spring through summer. When embedded in the skin, they may look like a freckle.
Lyme Disease

Lyme disease has occurred in 43 states, with the heaviest concentrations in the Northeast (Connecticut, Massachusetts, New Jersey, New York, Pennsylvania), the upper Midwest (Minnesota and Wisconsin), and along the northern California coast. It is caused by deer ticks and the lone star ticks which have become infected with spirochetes. Female deer ticks are about one quarter inch in size, and are black and brick red in color. Male deer ticks are smaller, and completely black. Lone star ticks are larger and chestnut brown in color.

Symptoms: The first symptoms of Lyme disease are flu like chills, fever, headache, dizziness, fatigue, stiff neck, and bone pain. If immediately treated by a physician, most individuals recover fully in a short period of time. If not treated, more serious symptoms can occur.

Treatment: If you believe that you received a tick bite, or if any of the signs and symptoms noted above appear, contact the SSO, who will authorize you to visit a physician for an examination and possible treatment.

Protective Measures: Standard field gear (work boots, socks, and work uniform) provide good protection against tick bites, particularly if the openings are taped. However, even when wearing field gear, the following precautions should be taken when working in areas that might be infested with ticks:

- When in the field, check yourself often for ticks, particularly on your lower legs and areas covered with hair;
- Spray outer clothing, particularly your pant legs and socks, with an insect repellant that contains DEET (N, N-diethyl-meta-toluamide);
- When walking in wooded areas, avoid contact with bushes, tall grass, or brush as much as possible;
- If you find a tick, remove it by pulling on it gently with tweezers;
- If the tick resists, cover the tick with salad oil for about 15 minutes to asphyxiate it, then remove it with tweezers,
- Do not use matches, a lit cigarette, nail polish or any other type of chemical to "coax" the tick out;
- Be sure and remove all parts of the tick's body, and disinfect the area with alcohol or a similar antiseptic after removal; and
- For several days to several weeks after removal of the tick, look for the signs of the onset of Lyme disease, such as a rash that looks like a bullseye or an expanding red circle surrounding a fight area, frequently seen with a small welt in the center;
- Also look for the signs of the onset of Lyme disease, such as an inflammation which is visible in the form of a rash comprising many red spots under the skin, which appears 3 to 10 days after the tick bite.

Stinging Insects

Bees, Hornets and Wasps

Contact with stinging insects like bees, hornets and wasps may result in site personnel experiencing adverse health effects that range from mild discomfort to fife threatening. Therefore, stinging insects present a serious

hazard to site personnel, and extreme caution must be exercised whenever site and weather conditions increase the risk of encountering stinging insects. Some of the factors related to stinging insects that increase the degree of risk associated with accidental contact are as follows:

- The nests for these insects are frequently found in remote wooded, grassy areas where many waste sites are located,
- The nests can be situated in trees, rocks, bushes or in the ground, and are usually difficult to see; Accidental contact with these insects is highly probable, especially during warm weather conditions when the insects are most active;
- If a site worker accidentally disturbs a nest, the worker may be inflicted with multiple stings, causing extreme pain and swelling which can leave the worker incapacitated and in need of medical attention;
- Some people are hypersensitive to the toxins injected by a sting, and when stung, experience a violent and immediate allergic reaction resulting in a life threatening condition known as anaphylactic shock;
- Anaphylactic shock manifests itself very rapidly and is characterized by extreme swelling of the body, eyes, face, mouth and respiratory passages;
- The hypersensitivity needed to cause anaphylactic shock can, in some people, accumulate over time and exposure; therefore, even if someone has been stung previously, and has not experienced an allergic reaction, there is no guarantee that they will not have an allergic reaction upon receipt of another sting.

With these things in mind and with the high probability of contact with stinging insects, all site personnel will comply with the following safe work practices:

- If a worker knows that he is hypersensitive to bee, wasp or hornet stings, they must inform the SSO of this condition prior to participation in site activities;
- All site personnel will be watchful for the presence of stinging insects and their nests, and will advise the SSO if a stinging insect nest or presence of a swarm of bees is located or suspected in the area;
- Any nests located on site will be flagged off and site personnel will be notified of its presence;
- If stung, site personnel will immediately report the SSO to obtain treatment and to allow the SSO to observe them for signs of allergic reaction;
- Site personnel with a known hypersensitivity to stinging insects will keep required emergency medication on or near their person at all times.

Spiders

Black Widow

The female black widow is black with a red hourglass marking on the underside of her abdomen. Black widows live in places like woodpiles, dark corners of buildings and houses, under boards and rocks. The bite almost always becomes painful between 30 minutes and 2 hours after occurring. 3 to 4 hours there may be muscle twitching near the bite which can lead to cramping, weakness and stiffness in the shoulders, back, chest or stomach. Other symptoms may include nausea, vomiting, headache, anxiety and changes in blood pressure.

Brown Recluse

This non-aggressive spider hides in undisturbed areas such as closets, corners, woodpiles and under sinks. Bites occur when the victim puts on clothing in which a spider has been hiding. The color of this spider varies from light tan to brown with a violin-shaped marking on the back of the head chest area. Symptoms at the site of the bite may start with pain, redness, swelling, itching and burning. Usually within 1 to 3 days, the bite may look like red rings around a black blister and could take on a "bull's eye" appearance. It may take up to 14 days to see the full effects of the bite. The more serious symptoms are, fever, rash, flu-like symptoms or darkened urine, are less common.

SPIDER CONTROL

Cleaning is the first step in spider control. Regular vacuuming, cleaning closets and storage spaces, reducing clutter and shaking out shoes and clothing before wearing help to reduce the chances of a bite. Prevent spiders from coming inside by caulking cracks and crevices on the outside of the house.
* Missouri Poison Center

5.0 Training Requirements

This section describes ER's project training requirements and site visitor policy. Training of all personnel shall be in accordance with OSHA 29 CFR 1910.120 and the National Fire Protection Association (NFPA) standards.

5.1 Project Training Requirements

The training listed in Table 5-1 will be provided to project participants as noted. All required training will be documented and this documentation maintained onsite.

Project Training Requirements:		
Topic	**Description**	**Personnel**
General Training		
Site Safety and Health Plan	Site-specific hazards and control requirements, before commencement of field work. Includes training in proper use and care of PPE.	All project personnel
Activity Hazard Analysis	Activity-specific hazards, controls and training requirements for a specific phase or activity, prior to commencement of activity	Workers, supervisors and oversight personnel engaged in the activity
Daily Safety Briefing	In addition to plan-of-the-day and daily hazard reminders, often used to cover a specific topic; provided refresher training on various issues; or changes in hazards, controls or procedures.	All field workers, supervisors and field oversight personnel
Emergency Action Plan	Roles, responsibilities, recognition of emergency conditions, reporting and notification, evacuation and other procedures.	All project personnel, with detailed information on procedures for workers with special responsibilities

Project Training Requirements:		
Topic	**Description**	**Personnel**
OSHA 40-Hour Hazardous Waste Operation (HAZWOPER) Training	General hazards and controls for hazardous waste activities at remediation sites, prior to performing work in an exclusion zone.	General site workers, supervisors, oversight personnel on HAZWOPER sites
OSHA 8-Hour Supervisor	Managing HAZWOPER work activities	Supervisors and management support staff on HAZWOPER sites
OSHA 8-Hour Refresher	Current annual refresher for HAZWOPER sites.	Workers, supervisors and oversight personnel engaged in the activity
OSHA 10-Hour Construction Safety	10-Hour OSHA Construction Safety Course	HSO at a minimum.
Hazard Communication	Requirements for SDS, labels; hazards of site materials and controls; location of and access to inventories and MSDS.	All project personnel potentially exposed to hazardous materials
Fire Extinguisher	General education on selection, distribution, and proper use of fire extinguishers.	All project personnel
Special Training		
Federal OSHA Lead Construction Standard (29 CFR 1926.62)	General hazards and controls for lead contamination activities at remediation sites, prior to performing work in an exclusion zone.	General site workers, supervisors, oversight personnel on HAZWOPER sites
First aid/ Cardiopulmonary Resuscitation (CPR)	Red Cross, National Safety Council or other authorized course, with current refresher	At least 2 project personnel
Other Heavy Equipment operations	Qualified by Construction Manager, Superintendent or Equipment Supervisor as documented on ECC Equipment Operator Qualifications Form	Equipment Operators
Power tools (e.g. chain saws, chippers, powder-actuated tools, compressed air systems)	Hazards and proper use and maintenance as described in operations manual. Powder-operated tool users certified by manufacturer.	Tool users

5.2 Visitor Indoctrination Policy

All site visitors will be required to review the daily tailgate safety issues and sign the visitor log. At a minimum, all visitors must be informed of the anticipated hazards and PPE requirements, designated work zones, escort procedures, and emergency procedures.

6.0 Personal Protective Equipment

The following is a brief description of the personal protective equipment, which may be required during various phases of the project. The USEPA terminology for protective equipment will be used; Levels A, B, C and D.

Respiratory protective equipment shall be NIOSH-approved and use shall conform to OSHA 29 CFR Part 1910.134 Requirements. Each employer shall maintain a written respirator program detailing selection, use, cleaning, maintenance and storage of respiratory protective equipment. The written Respiratory Program is maintained at the local and regional offices.

6.1 Level A Protection Shall Be Used When: (NOT ANTICIPATED)

- The extremely hazardous substance requires the highest level of protection for skin, eyes and the respiratory system;
- Substances with a high degree of hazard to the skin are known or suspected;
- Chemical concentrations are known to be above IDLH levels; or,
- Biological hazards requiring Level A are known or suspected.

6.2 Level B Protection Shall Be Used When: (NOT ANTICIPATED)

- The substance(s) has been identified and requires a high level of respiratory protection but less skin protection;

- Concentrations of chemicals in the air are IDLH or above the maximum use limit of an APR with full-face mask;
- Oxygen deficient or potentially oxygen deficient atmospheres (<19.5%) are possible; and/or, Confined space entry may require Level B.
- Incomplete identification of gases and vapors, but not suspected to be harmful to skin or skin absorbable

6.3 Level C Protection Shall Be Used When:

- The same level of skin protection as Level B, but a lower level of respiratory protection is required;
- The types of air contaminants have been identified, concentrations measured, and an air-purifying respirator is available that can remove contaminants; or,
- The substance has adequate warning properties and all criteria for the use of APR respirators has been met

6.4 Level D Protection Shall Be Used When:

- The atmosphere is demonstrated to be below OSHA permissible exposure limits
- Work functions preclude splashes, immersion or the potential for unexpected inhalation of, or contact with, hazardous concentrations of harmful chemicals.

Level D Protection Equipment at a Minimum Shall Consist of:

Standard work clothes (long pants/sleeved shirt)	Full body washable
Rain Suit	As required
Safety Shoes/Boots (type)	ASTM Certified
Work Gloves	Cut Resistant
Hard Hat	ANSI approved
Safety Glasses	ANSI approved
High Visibility Vest	ANSI Class 2
Splash Resistant Coveralls(when splash danger exist)	Tyvek 2000 / 4000 or equivalent

Specific operating procedures for PPE and Respiratory Protection are available on the intranet.

6.5 Decisions to Upgrade/Downgrade PPE

All decisions to downgrade from Level C to D must be accompanied by air monitoring results. The Project Health and Safety Manager must be consulted prior to on-site decisions to downgrade. All decisions must be documented with an Addendum to the HASP.

The following conditions will necessitate reevaluation of PPE use.

- commencement of a new work not previously identified
- change of job tasks during a work phase
- change of season/weather
- contaminants other than those identified in Safety Plan
- change in ambient levels of contaminants
- change in work which affects degree of chemical contact

6.6 Project Personal Equipment Requirements

Project Personal Protective Equipment Requirements:						
Activity	**Respiratory Protection**	**Body Protection**	**Hand Protection**	**Eye/Face Protection**	**Foot Protection**	**Hearing Protection**
Site Mobilization	Not Anticipated	Standard Work Clothes	Not Anticipated	Not Anticipated	Not Anticipated	Plugs or muffs when noise levels exceed 85db
Chainsaw operations-clearing and grubbing	Not Anticipated	Chainsaw Chaps	Cut resistant work gloves	Hard hat mounted face screen, ANSI approved safety glasses	ASTM Certified safety boots	Plugs and muffs
Excavation and Stockpiling of Contaminated Materials (Level D, with Level C contingency)	Level D with Air Monitoring Justification Level C Contingency	Level D, Breathable SafeGard® SMS or equivalent if necessary	Cut resistant work gloves	ANSI-approved safety glasses	ASTM Certified safety boots in machine, add booties for ground personnel working in muddy areas	Plugs or muffs when noise levels exceed 85db
Soil Treatment with Lime Material	Level C for ground spread and mixing	Level D, Breathable SafeGard® SMS or equivalent if necessary	Cut resistant work gloves	Respirator with P100 cartridges, if OV vapors present follow excavation and air monitoring guidelines	ASTM Certified safety boots in machine, add optional booties/rubber chemical boots for ground personnel working in mud	
Restoration (Level D)	Not Anticipated	Not Anticipated	Cut resistant work gloves	ANSI approved safety glasses	ASTM Certified safety boots	Plugs or muffs when noise levels exceed 85db

Personal Protective Equipment Inspection and Care are covered in the ER SOP HS-24.

6.7 Respiratory Protection Program

ER shall implement ER SOP HS-26 Respiratory Protection Program for its employees and subcontractors and train them on its contents. The program will be administered by the HSO.

Respiratory protective equipment shall be NIOSH-approved and use shall conform to OSHA 29 CFR Part 1910.134 Requirements. ER and subcontractors shall maintain a written respirator program detailing selection, use, cleaning, maintenance and storage of respiratory protective equipment.

7.0 Medical Monitoring Requirements

7.1 Pre-Employment Medical Examination

a. Pre-employment medical examinations are required for persons working at hazardous waste sites.

b. All examinations must be completed and documented prior to assignment to this site.
c. All examinations will be conducted following parameters established by WorkCare™.

7.2 Site Specific Medical Examination

a. Not anticipated.

7.3 Annual Medical Examination

a. The medical examination must have been within a 6-month period prior to on-site activity and repeated annually.

7.4 Suspected Exposure Medical Examination

a. Following any suspected uncontrolled exposure to site contaminants, personnel should be scheduled for a special medical examination.
b. The medical examination will be specific for the contaminants and the associated target organs or physiological system.
c. Questions regarding the type of medical examination can be directed to ER's Corporate Health and Safety Manager.

7.5 Contractor Physical Examination Requirements

a. All subcontractors entering the contamination reduction or exclusion zone will have adequate medical surveillance satisfying 29 CFR 1910.120.10 (f).

8.0 Health and Hazard Monitoring

According to 29 CFR 1910.120 (h) Air Monitoring shall be used to identify and quantify airborne levels of hazardous substances and health hazards in order to determine the appropriate level of employee protection needed on-site. ER shall be tasked for all air monitoring on this project and will maintain an air monitoring program to evaluate concentrations of specific chemical groups or contaminants in ambient air during work activities. This program will include both real-time, direct monitoring equipment, and chemical-specific personal air monitoring as appropriate.

Both area and personal monitoring will be conducted to document potential exposures to hazardous constituents, as well as to evaluate the adequacy of the Personal Protection Equipment (PPE) program.

8.1 Routine Air Monitoring Requirements

- Upon initial entry to rule out IDLH conditions
- When the possibility of an IDLH condition or flammable atmosphere has developed
- When excavation work begins with periodic checks, and when odors or conditions change
- Perimeter monitors – upwind and downwind with daily bump tests, weekly calibration according to manufacturer instructions, and daily data downloads to be saved with project files and emailed to PHSM
- Contaminants other than those previously identified are being handled
- A different type of operation is initiated
- Employees are handling leaking drums or containers or working in areas with obvious liquid contamination
- During confined space work

Air monitoring will consist at a minimum of the criteria listed below. All air monitoring data will be documented and available in the command post site files for review by all interested persons. Air monitoring instruments will be calibrated and maintained in accordance with the manufacturer's specifications. Calibration and maintenance performed will be entered in the site log and/or instrument log book.

8.2 Site Specific Air Monitoring Requirements

Health Hazard Monitoring:

Activity	Target Analyte	Instrument	Frequency	Action Levels	Actions/Upgrade and Rationale
Excavation (Level D, Level C Contingency)	Coal Tar Pitch Volatiles (Benzene-Benzene Soluble Fraction)	PID to check for PAH's, With meter set for ethylbenzene or equivalent Draeger type bellows pump with colormetric tubes Passive 3M badges for PAH's Gillian pumps with VOC/PAH tubes Perimeter Monitoring up and downwind	First two days of new excavations, when conditions / locations change Periodically Continuously During excavation	0 to >0.25ppm 0.25 > 0.5ppm benzene Follow up with Draeger to determine benzene level > 0.5 to 5ppm benzene 5ppm< benzene Conc with draeger	Level D Level C Level C with increased cartridge change out to 2x's daily Stop Work move to upwind side of excavation, check perimeter monitors, check engineering controls work from upwind to downwind,
Excavation	Arsenic / Lead	Gilian personal sample pump or equivalent	First two days of new excavations, when conditions change	0.005 mg/m^3 As 0.025 mg/m^3 Pb	Move to Level C, Re-evaluate engineering controls for dust creation, Re-evaluate for PPE
Site wide	**Temperature Extremes Heat	Thermometer In conjunction with web site www.intellicast.com for heat index, rel hum% measurements if WBGT is not available	Observe workers for signs of heat stress and implement physiological monitoring if warranted. **Every 2 hours** **Every 60 minutes** **Every 30 minutes**	80-90 ^{O}F HEAT INDEX **90 -105 ^{O}F HEAT INDEX** **105 – 130 ^{O}F HEAT INDEX** **>130 ^{O}F HEAT INDEX**	Implement work rest schedule per HS-17
Site Wide	Temperature Extremes Cold Stress	Thermometer In conjunction with web site www.intellicast.com for heat index, rel hum% measurements if WBGT is not available	Observe workers for signs of cold stress. Refer to cold stress ER SOP HS-05	See ER SOP HS-05 *** See ACGIH warming schedule	Implement work warming schedule and refer to ER SOP HS-05

**When permeable work clothes are worn (street clothes or clothing ensembles over street clothes), regularly observe workers for signs and symptoms of heat stress and implement physiological monitoring as indicated below. This should start when the heat index reaches 80°F (see table above), or sooner if workers exhibit symptoms of heat stress. These heat index values were devised for shady,

light wind conditions. Exposure to full sunshine can increase the values by up to 15°F. In addition, strong winds, particularly with very hot, dry air, can be extremely hazardous. When wearing impermeable clothing (i.e. – clothing doesn't allow for air or water vapor movement such as Tyvek), physiological monitoring as described below shall be conducted by all ER employees and their subs when the ambient temperature reaches 80°F or at a lower temperature when workers begin to exhibit signs and symptoms of heat stress.
*** ACGIH Warming Schedule

Air Temperature – Sunny Sky		No Noticeable Wind		5 mph Wind		10 mph Wind		20 mph Wind	
°C	°F	Max. Work Period	No. Of Breaks	Max. Work Period	No. Of Breaks	Max. Work Period	No. Of Breaks	Max. Work Period	No. Of Breaks
-26 to -28	-15 to -19	Normal Breaks (1)		Normal Break (1)		75 min.	2	40 min.	4
-29 to -31	-20 to -24	Normal Breaks (1)		75 min.	2	55 min.	3	30 min.	5
-32 to -34	-25 to -29	75 min.	2	55 min.	3	40 min.	4	Non-emergency work should cease	
-35 to -37	-30 to -34	55 min.	3	40 min.	4	30 min.	5		
-38 to -39	-35 to -39	40 min.	4	30 min.	5	Non-emergency work should cease			
-40 to -42	-40 to -44	30 min.	5	Non-emergency work should cease					
< -42	< -44	Non-emergency work should cease							

8.3 Integrated Personnel Exposure Monitoring

ER will perform personal exposure air monitoring. Monitoring shall be performed per ER HS-01 Air Monitoring. Sampling for SVOC, shall be conducted by ER utilizing PID Multigas analyzer, and 3M 3500 series diffusive badges or equivalent, appropriate to OSHA methods. Analysis will be done by AIHA accredited laboratory. Copies of all sampling data, including instrument calibration and maintenance, personal data sheets, COCs, and analytical results shall be provided to ER PHSM weekly as scanned documents and raw data files from monitoring equipment data loggers.

9.0 Contamination Control and General Field Safety Rules

9.1 Work Zones

The primary purpose for site controls is to establish the hazardous area perimeter, to reduce migration of contaminants into clean areas and to prevent access or exposure to hazardous materials by unauthorized persons. At the end of each workday, the site should be secured or guarded, to prevent unauthorized entry. Site work zones will include:

Support Zone (SZ)

This uncontaminated support zone (SZ) will be the area outside the exclusion zone (EZ) and contamination reduction zones (CRZ), and within the geographic perimeters of the site. This area is used for staging of materials, parking of vehicles, office and laboratory facilities, sanitation facilities, and receipt of deliveries. Personnel entering this zone may include delivery personnel, visitors, security guards, etc., who will not necessarily be permitted in the exclusion zone (EZ). All personnel arriving in the support zone will upon arrival, report to the command post and sign the site entry/exit log. There will be one controlled entry/exit point from the support zone (SZ) to the contamination reduction zone (CRZ).

Contamination Reduction Zone (CRZ)

The decontamination zone will provide a location for removal of contaminated personal protective equipment and final decontamination of personnel and equipment. All personnel and equipment should exit via the decontamination area. A separate decontamination area will be established for heavy equipment.

1. The CRZ is a buffer zone between contaminated and clean areas.
2. Identified by yellow banner guard or other noticeable material.

3. Decontamination line is located at the boundary of the CRZ entering the decontamination area.

Exclusion Zone (EZ)

The exclusion zone will be the contaminated area inside the site perimeter. Entry to and exit from this zone will be made through a designated point and all personnel will be required to sign the exclusion zone entry/exit log located at the decontamination area. Appropriate warning signs to identify the exclusion zone should be posted (i.e. "DANGER - AUTHORIZED PERSONNEL ONLY", "PROTECTIVE EQUIPMENT REQUIRED BEYOND THIS POINT", etc.) Exit from the exclusion zone must be accompanied by personnel and equipment decontamination as described in Section 10.0 of this plan.

1. These areas will be defined by orange construction fence / brightly colored stations with yellow rope with streamers or similar material to identify boundaries (checked and repaired daily)
2. General Safety Rules for Exclusion Zone (EZ)
   a. wear the appropriate level of PPE defined in plan
   b. do not remove any PPE or break the integrity to touch parts of your body
   c. no smoking, eating or drinking
   d. no horseplay
   e. no matches or lighters in this zone
   f. implement the communication and line of sight system

9.2 General Field Safety Rules

- Horseplay is not permitted at any time.
- All visitors must be sent to the command post. Visitor log will be maintained at the command post or with the security guard. All personnel coming on site will sign in and out on a daily basis.
- Visitors are not allowed in the work areas without authorization.
- Security will be maintained at the site by closing all gates during normal work hours. Site will be locked up in the evening.
- If unauthorized members of the public are found on site, contact RM immediately, if not available contact RPM, and do not leave the individual unattended.
- It is ER policy to practice administrative hazard control for all site areas by restricting entrance to exclusion zones to essential personnel and by using operational SOPs.
- Whenever possible, avoid contact with contaminated (or potentially contaminated) surfaces. Walk around (not through) puddles and discolored surfaces. Do not kneel on the ground or set equipment on the ground. Stay away from any waste drums unless necessary. Protect equipment from contamination by bagging.
- Eating, drinking, or smoking is permitted only in designated areas in the support zone.
- Hands and face must be thoroughly washed upon leaving the decon area.
- Beards or other facial hair that interferes with respirator fit will preclude wearing a respirator.
- All equipment must be decontaminated or discarded upon exit from the exclusion zone.
- All personnel exiting the exclusion zone must go through the decontamination procedures described in Section 10.0.
- Safety Equipment described in Section 6.0 will be required for all field personnel.
- Personnel will only travel in vehicles where individual seats for each occupant are provided.
- Seat belts will be worn as required.
- Fire extinguishers will be available on site and in all areas with increased fire danger such as the refueling area.
- A minimum of two personnel will always be on site whenever heavy equipment is operated.
- Only necessary personnel need to be on or around heavy equipment.
- Employees will not interfere with or tamper in any way with air monitoring equipment.
- Backhoes or other equipment with booms shall not be operated within a minimum of 10 feet of any electrical conductor.

Minimum Clearance from Energized Overhead Electric Lines

NOMINAL SYSTEM VOLTAGE	MINIMUM REQUIRED CLEARANCE
0-50 kV	10 feet
51-100 kV	12 feet
101-200 kV	15 feet
201-300 kV	20 feet
301-500 kV	25 feet
501-750 kV	35 feet
751-1000 kV	45 feet

- Buddy System
  - The buddy system is mandatory at any time that personnel are working in the exclusion zone, remote areas, or when conditions present a risk to personnel.
  - A buddy system requires at least two trained/experienced people who work as a team and maintain at a minimum audible and/or visual contact while operating in the exclusion zone.
- Communication Procedures
  - Cellular phones shall be used.
  - The site evacuation signal will be 3 blasts on the air or vehicle horn.

10.0 Decontamination Procedures

In general, everything that enters the exclusion zone at this site, must either be decontaminated or properly discarded upon exit from the exclusion zone (EZ). All personnel, including any state and local officials must enter and exit the exclusion zone (EZ) through the contamination reductions zone (CRZ). Prior to demobilization, contaminated equipment will be decontaminated and inspected before it is moved into the support zone (SZ). Any material that is generated by decontamination procedures will be stored in a designated area in the exclusion zone until disposal arrangements are made.

NOTE: The type of decontamination solution to be used is dependent on the type of chemical hazards. The decontamination solution for this site is water. Decontamination solution will be changed daily (at a minimum) and collected and stored on-site until disposal arrangements are finalized.

10.1 Procedures for Equipment Decontamination

Following decontamination and prior to exit from the exclusion zone (EZ), the Response Manager shall be responsible for insuring that the item has been sufficiently decontaminated. This inspection shall be included in the site log when demobilizing from site.

Equipment decontamination will consist of the following steps:

Station 1: Move equipment to decontamination areas or pads

Station 2: Dry decontamination, removal of loose debris or mud with spud bars and shovels if moving to adjacent work areas.
Station 3: Clean water decontamination when moving across site and the possibility of cross contamination of site is possible or when demobilizing from site

10.2 Procedure for Personnel Decontamination

This decontamination procedure applies to personnel at this site wearing Level D protection. These are the minimum acceptable requirements:

Station 1: Remove debris and contaminants from boots and clothing
Station 2: Remove work gloves
Station 3: Wash hands and face thoroughly with soap and water, or use of antibacterial hand wipes in the case of severe weather conditions such that water may cause injury due to cold temperature

This decontamination procedure applies to personnel at this site wearing Level C protection. These are the minimum acceptable requirements:

Station 1: Remove debris and contaminants from boots and clothing
Station 2: Remove outer work gloves
Station 3: Remove outer garments – Tyvek or equivalent, and place in disposable PPE container
Station 4: Clean outside of respirator with help of attendant
Station 5: Remove respirator, cartridges, and clean while still donning inner nitrile gloves
Station 6: Remove inner gloves and dispose of in disposable PPE container
Station 3: Wash hands and face thoroughly with soap and water, or use of antibacterial hand wipes in the case of severe weather conditions such that water may cause injury do to cold temperature

Eating, drinking, chewing gum/tobacco, smoking, or any practice that increases the probability of hand to mouth transfer and/or ingestion of materials is prohibited in any areas where the possibility of contamination exists and is permitted only in the designated break area.

Personnel will not wear or bring dirty/decontaminated clothing into the break areas.

10.3 Disposition of Decontamination Wastes

1. All equipment and solvents used for decontamination shall be decontaminated or disposed of with the established waste streams.

2. Commercial laundries or cleaning establishments that decontaminate or are used to launder contaminated clothing shall be informed of the presence and potentially harmful effects of the contaminants.

11.0 Hazard Communication Program

Each contractor will be responsible for maintaining a copy of their Hazardous Communication Program and SDS' on site. The following items are specific to this job site:

11.1 Safety Data Sheets

1. Safety Data Sheets will be maintained at the Command Post in the Health and Safety Binder or be readily available via the internet.
2. SDS' will be available to all employees for review during the work shift.
3. See Attachment C for chemical inventory.

11.2 Container Labeling per new GHS standard

1. All containers received on site will be inspected by the contractor using the material to ensure the following:
   a. all containers clearly labeled
   b. appropriate hazard warning
   c. name and address of the manufacturer

11.3 Employee Training and Information

1. Prior to starting work, each employee will attend a health and safety orientation and will receive information and training on the following:
   a. an overview of the requirements contained in the Hazardous Communication Standard
   b. Hazardous chemicals present at the site
   c. the location and availability of the written Hazard Communication Program
   d. physical and health effects of the hazardous chemicals
   e. methods of preventing or eliminating exposure
   f. emergency procedures to follow if exposed
   g. how to read labels and review SDS' to obtain information
   h. SDS file and location of hazardous chemical list

Hazard Communication Program and applicable SDS are also available on the ER Intranet.

12.0 Emergencies/Incidents/Injuries

It is essential that site personnel be prepared in the event of an emergency. Emergencies can take many forms; illnesses or injuries, chemical exposure, fires, explosions, spills, leaks, releases of harmful contaminants, or sudden changes in the weather. The following sections outline the general procedures for emergencies. Emergency information should be posted as appropriate.

12.1 Emergency Contacts

The following lists the emergency call list and the project organization. This table must be available to the crew at all times. In case of an emergency, the crew must be transported to the designated medical center. Bristow Medical Center shall be notified of work activities and potential for personnel contamination. The following table provides contacts for emergency situations.

Emergency Call List and Project Organization		
Service	**Name/Organization**	**Emergency Phone**
Fire/Police/Emergency Medical	Bristow Police Department	911
	Bristow Fire Department	911
*Clinic	Concentra 5682 W Skelly Dr. Tulsa, OK 74107	Meyon Ward 918-446-1891 M-F 8AM-5PM
*Hospital – After Hours	Bristow Medical Center Emergency Room 700 W 7th Ave Bristow, OK 74010	918-367-2215 Use during clinic's off hours
Injury Management	1 Source – Mike Pelz Ovidio Saenz	219-427-5933 (office) 815-370-2940 (mobile) 219-427-5931 (office) 855-517-6872 (mobile)
COVID Concerns	ER COVID Hotline	636-680-8152
Client Representative	Katrina Higgins-Coltrain, USEPA R6 RPM	xxx-xxx-xxxx (mobile)

ER Sr. Response Manager	Mike Gipson	(mobile)
ER Site Health and Safety Officer	TBD	(mobile)
ER Project HS Manager	Gary Fanucchi	720-440-3325 (mobile)

*Directions from site to hospital and clinic are located in Attachment B and will be posted in the project office and available in all ER vehicles.

The route to the hospital and clinic shall be verified by _____
Route verified by_____on _____ (date)

- Distance from site to the hospital is approximately _____ miles. Approximate driving time is _____.
- Distance from site to the clinic is approximately _____ miles. Approximate driving time is_____.

12.2 Additional Emergency Numbers

Poison Control Center	800-222-1222
National Response Center	800-424-8802
Center for Disease Control	800-232-4636
ATF (Bomb Hotline)	888-ATF-BOMB (888-283-2662)
Chemtrec	800-262-8200

ER Contacts

ER Corporate Office	888-814-7477 (24 Hr.)

12.3 Emergency Equipment Available On-Site

COMMUNICATIONS EQUIPMENT	LOCATION
Telephones	N/A
Mobile Telephones	RM
Two-Way Radios	As necessary – channel 1 or appropriate channel assigned onsite
Emergency Alarms/Horns	Air Horns/Vehicle Horns (3 blasts)
Other:	N/A

MEDICAL EQUIPMENT	LOCATION
First Aid Kits	Command Post, with crew, and in all vehicles.
Stretcher/Backboard	N/A
Eye Wash Station: *(within 100 feet of hazard zone)*	Support zone / Contamination Reduction Zone, eyewash bottles near work areas, in vehicles
Safety Shower	Command post

FIRE FIGHTING EQUIPMENT	LOCATION
Fire Extinguishers	Command Post / Support zone, in all equipment and vehicles
Other	N/A

SPILL OR LEAK EQUIPMENT	LOCATION
Absorbent Boom/Pads:	Support Zone
Dry Absorbent:	Support Zone

12.4 Incident Reporting/Investigations

All incidents, including personal injury and property damage, must be reported to the your immediate supervisor within 20 minutes of incident. RM / HSO shall implement initial investigation thereafter.

The RM will contact the Project Health and Safety Manager by telephone immediately. The RM, HSO, and effected employees will conduct an immediate investigation of the incident and document all results on the Incident and Investigation Report form.

13.0 Emergency Response Contingency Plan

13.1 Project Personnel Responsibilities During Emergencies

As the administrator of the project, the RM has primary responsibility for responding to and correcting emergency situations. The RM will:

- Take appropriate measures to protect personnel including: withdrawal from the exclusion zone (EZ), total evacuation and securing of the site or up-grading or down- grading the level of protective clothing and respiratory protection.
- Take appropriate measures to protect the public and the environment including isolating and securing the site, preventing run-off to surface waters and ending or controlling the emergency to the extent possible.
- Ensure that appropriate Federal, State and local agencies are informed, and emergency response plans are coordinated. In the event of fire or explosion, the local fire department should be summoned immediately. In the event of an air release of toxic materials, the local authorities should be informed in order to assess the need for evacuation. In the event of a spill, sanitary districts and drinking water systems may need to be alerted.
- Ensure that appropriate decontamination treatment or testing for exposed or injured personnel is obtained.
- Determine the cause of the incident and make recommendations to prevent the recurrence.
- Ensure that all required reports have been properly prepared and submitted.

13.2 Medical Emergencies:

Any person who becomes ill or injured in the exclusion zone (EZ) must be decontaminated to the maximum extent possible. If the injury or illness is minor, full decontamination should be completed and first aid administered prior to transport. If the patient's condition is serious, at least partial decontamination should be completed (i.e., complete disrobing of the victim and redressing in clean coveralls or wrapping in a blanket.) First aid should be administered while awaiting an ambulance or paramedics. All injuries and illnesses must immediately be reported to Vice President of Health and Safety.

Onsite First Aid Support

Onsite medical support during project execution will be available from two or more individuals who are trained in First Aid and Cardiopulmonary Resuscitation (CPR) and blood borne pathogens. First aid kits shall be Type III, 16 unit kits, including one pocket mouthpiece or CPR barrier. Kits shall be checked prior to use, and at least weekly when work is in progress to ensure that contents are replaced as used.

Medical Transport of Employees and Case Management

For non-life threatening injuries, a local clinic will be identified with the assistance of the Corporate Medical Consultant, 1 Source. 1 Source, injury management, will be contacted prior to transporting any non-life threatening injured worker to the clinic to develop an appropriate medical treatment plan. If medical evaluation is necessary, the 1Source nurse/physician will contact the clinic ahead of the arrival of the patient to establish oversight of case management. Under no circumstances will an injured employee drive unescorted to a hospital, clinic, etc. An employee with minor injury may be transported by car after first aid treatment is given. The HSO or other project management personnel will transport the injured person to the facility. The employee who transports the injured person shall be trained in first aid and CPR whenever possible. When the injury is severe, or when in doubt concerning the severity of injury, the employee will be transported by ambulance.

Injured employees that require medical treatment or are taken to a doctor, hospital, clinic, etc., will not be allowed to resume work without a written return to work statement from the treating physician. This statement shall supply a medical diagnosis of the problem, the date of return to work, and work limitations. Should a return to work statement such as "light duty" be given, the treating physician will be contacted to determine the specific limitation. ER will make an assessment of work the employee routinely performs whether or not the limitation interferes with the employee's routine job assignment.

Whenever there are questions on the appropriateness of the diagnosis or prescribed course of treatment, 1 Source will be contacted to arrange for a second opinion. Copies of all Incident and Investigation Reports will be sent to the ER Vice President of Health and Safety.

13.3 Fire or Explosion:

In the event of a fire or explosion, the local fire department should be summoned immediately. Upon their arrival the RM or designated alternate will advise the fire commander of the location, nature and identification of the hazardous materials on- site.

If it is safe to do so, site personnel may:

- Use firefighting equipment available on site.
- Remove or isolate flammable or other hazardous materials which may contribute to the fire.

- 13.4 Spills, Leaks or Releases:

- In the event of a spill or a leak, site personnel will:

- Locate the source of the spillage and stop the flow if it can be done safely.
- Begin containment and recovery of the spilled materials.

- 13.5 Evacuation Routes and Resources:

- Evacuation routes will be established by work area locations for this site. All buildings and outside work areas shall be provided with two designated exit points. Evacuation shall be conducted immediately, without regard for equipment under conditions of extreme emergency. Evacuation notification will be three blasts on an air horn, vehicle horn, or by verbal communication via radio.
- Keep upwind of smoke, vapors or spill location.
- Exit through the CRZ if possible.
- If evacuation is not via the CRZ, site personnel should remove contaminated clothing once they are in a location of safety and leave it near the exclusion zone or in a safe place.
- The RM will conduct a head count to insure all personnel have been evacuated safely.
- In the event that emergency site evacuation is necessary, all personnel are to:
    - Escape the emergency situation;
    - Decontaminate to the maximum extent practical; and,
    - Meet at the command post.
- In the event that the command post is no longer in a safe zone, meet: at the designated upwind location established in the daily safety meeting and recorded on daily ER tool box talk form.

13.6 Severe Weather

The HSO or designated representative will monitor weather reports issued by the local media and the National Weather Service (NWS), and be notified immediately in the event of impending storms. Weather monitoring will be increased when signs of impending storms, including darkening skies, increased wind, heavy rain, or thunder/lightning, are noticed. The general rule for lightning is "If You See It, Flee It; If You Hear It, Clear It." The flash/bang (f/b) technique may be used to estimate distance to lightning, although using this method requires accurate matching of lightning to thunder, which may not always be possible. The f/b technique is defined as: for each five seconds from the time of observed lightning flash to hearing the associated thunder, the lightning is one

mile away. All outside activities will be suspended when a lightning flash is observed in the immediate area, or f/b of 30 seconds (6 miles) or less is noted.

Personnel may continue indoor work activities except for the use of electrical equipment, telephones, and computers. Upon suspension of site activities, all site personnel will gather in a safe location in the support zone for a head count and further instructions. Activities may resume when 30 minutes have passed since the last observable f/b of 30 seconds or less. If a sudden lightning storm catches personnel in an exposed area, they should seek the lowest possible area, away from large objects which may attract lightning or fall over, and assume a crouching position with head lowered. AREAS TO AVOID INCLUDE WATER, TREES, UTILITY POLES, HIGH GROUND, HEAVY EQUIPMENT, AND ALL TALL, ISOLATED OBJECTS. A person struck by lightning needs immediate, professional medical assistance (contact 911). The body will not carry an electrical charge, so personnel trained in first aid/CPR should assist with treatment for shock and/or burns until professional medical assistance is available

Attachment A

Site Safety Plan Amendments

Site Safety Plan Amendment	
Amendment No.:	
Site Name:	
Date of Issue:	
Type of Amendment:	
Reason for Amendment:	
Alternate Safeguard Procedures:	
Required Changes in PPE:	

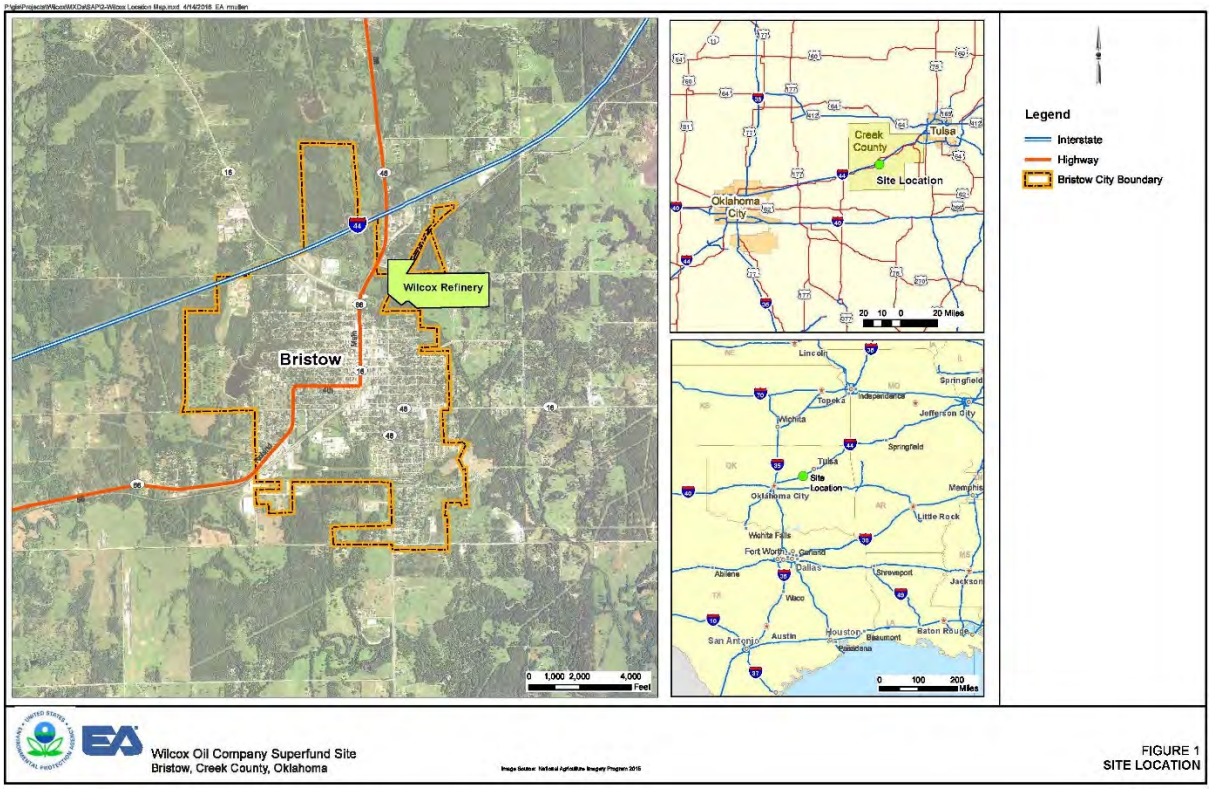
_____ _____
USEPA Remedial Project Manager (Date)

_____ _____
ER Response Manager (Date)

_____ _____
ER Project Health and Safety Manager (Date)

Attachment B

Site Maps



Source Control ROD Wilcox Oil Company Site

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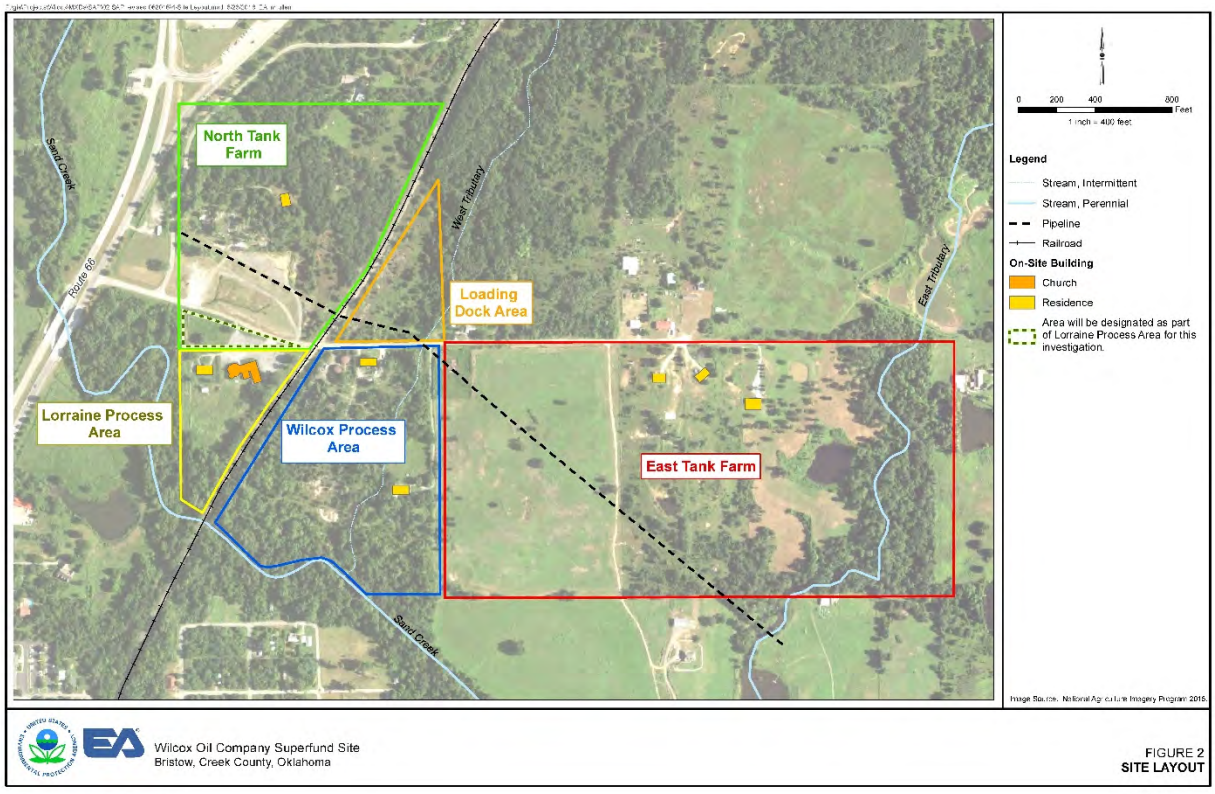

Source Control ROD Wilcox Oil Company Site

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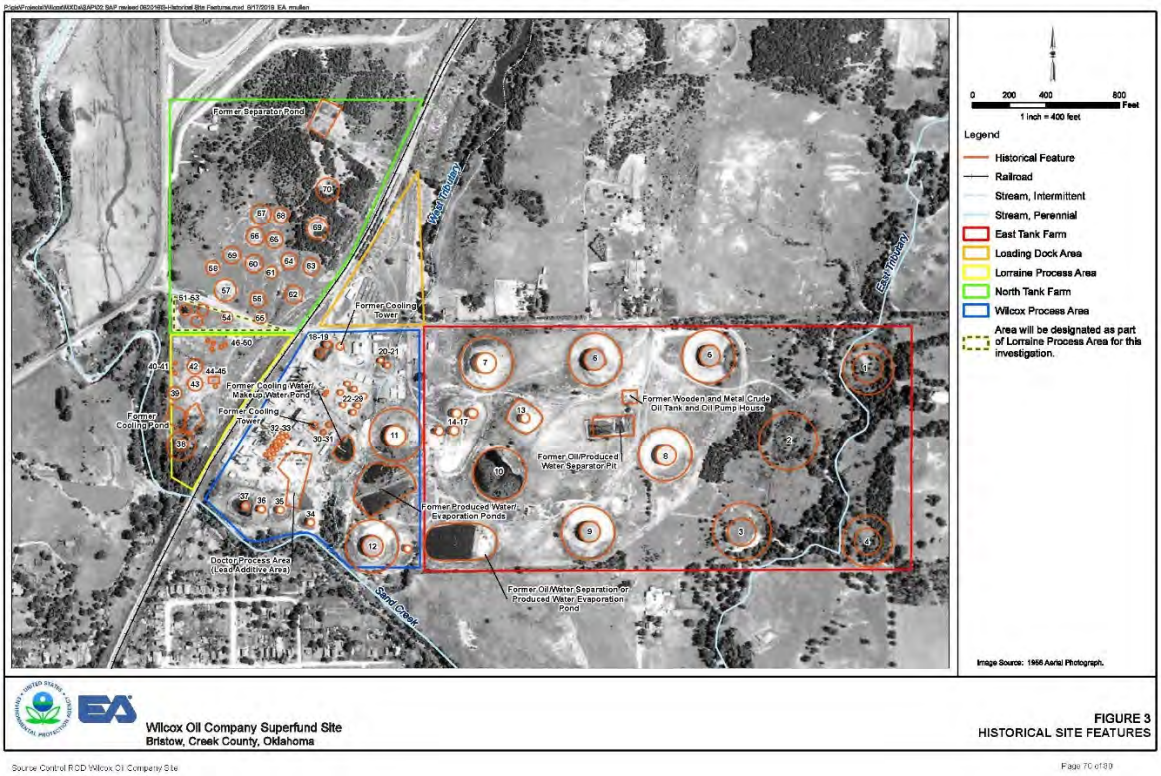

Former Separator Pond
West Tributary
East Tributary
Former Cooling Tower
Former Cooling Water Makeup Water Pond
Former Cooling Tower
Former Cooling Pond
Former Wooden and Metal Crude Oil Tank and Oil Pump House
Former Oil/Produced Water Separator Pit
Former Produced Water Evaporation Ponds
Former Oil/Water Separation or Produced Water Evaporation Pond
Docter Process Area (Lead Additive Area)
Sand Creek
0 200 400 800 Feet
1 inch = 400 feet
Legend
Historical Feature
Railroad
Stream, Intermittent
Stream, Perennial
East Tank Farm
Loading Dock Area
Lorraine Process Area
North Tank Farm
Wilcox Process Area
Area will be designated as part of Lorraine Process Area for this investigation.
Image Source: 1966 Aerial Photograph.
Wilcox Oil Company Superfund Site
Bristow, Creek County, Oklahoma
FIGURE 3
HISTORICAL SITE FEATURES

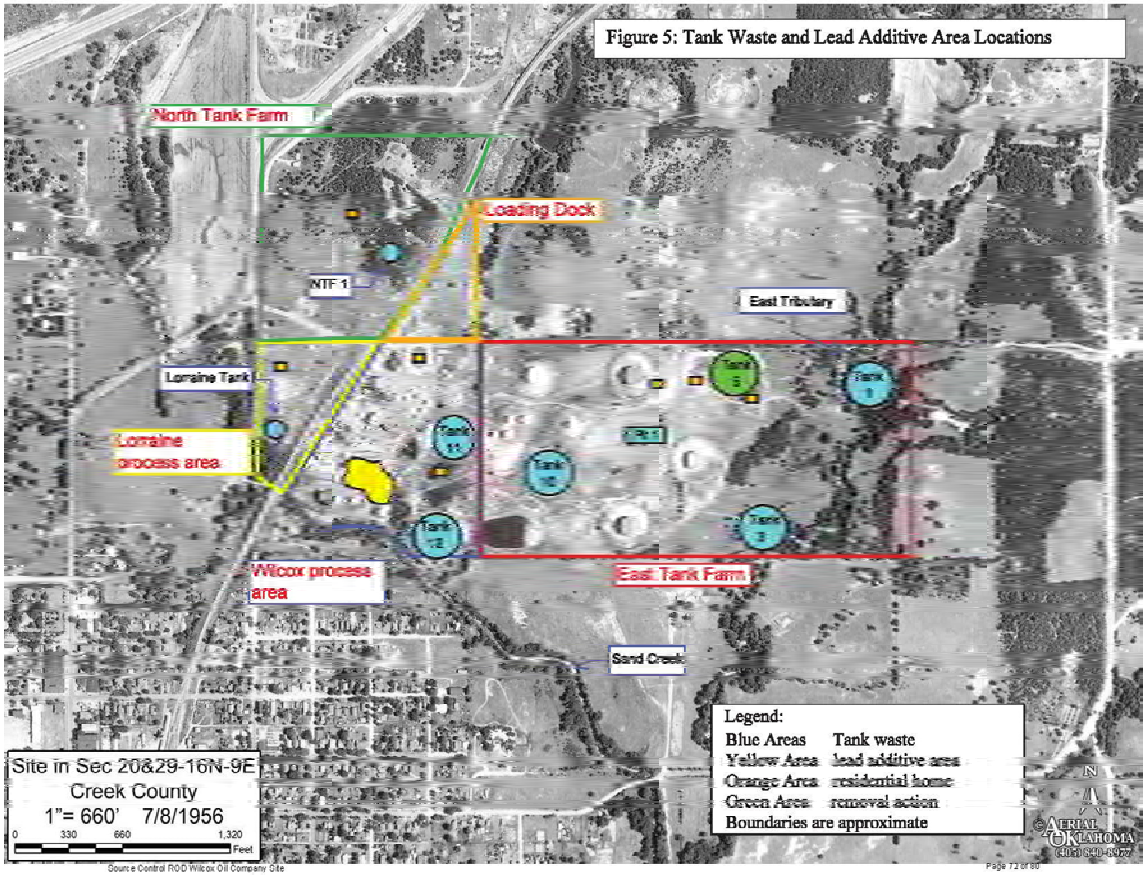
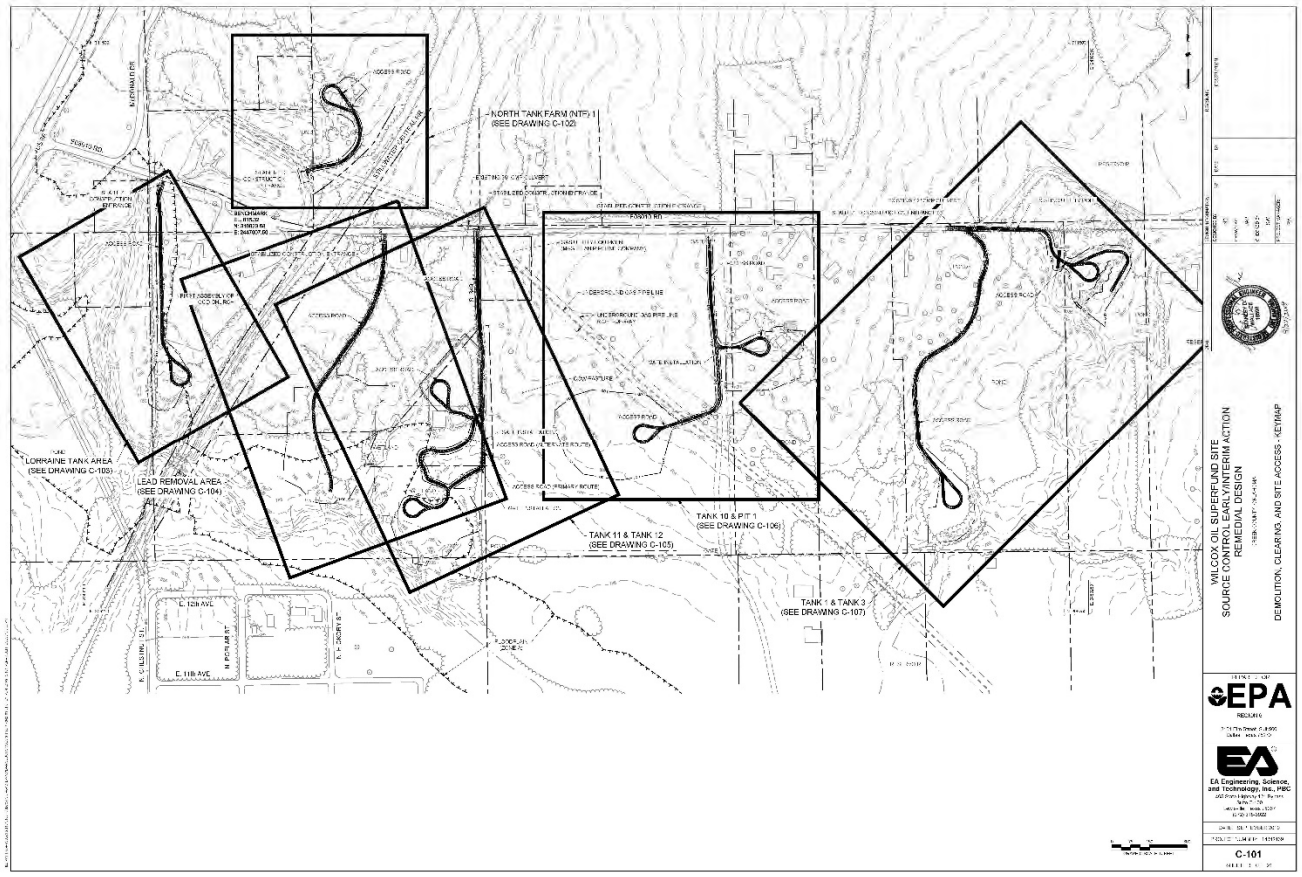
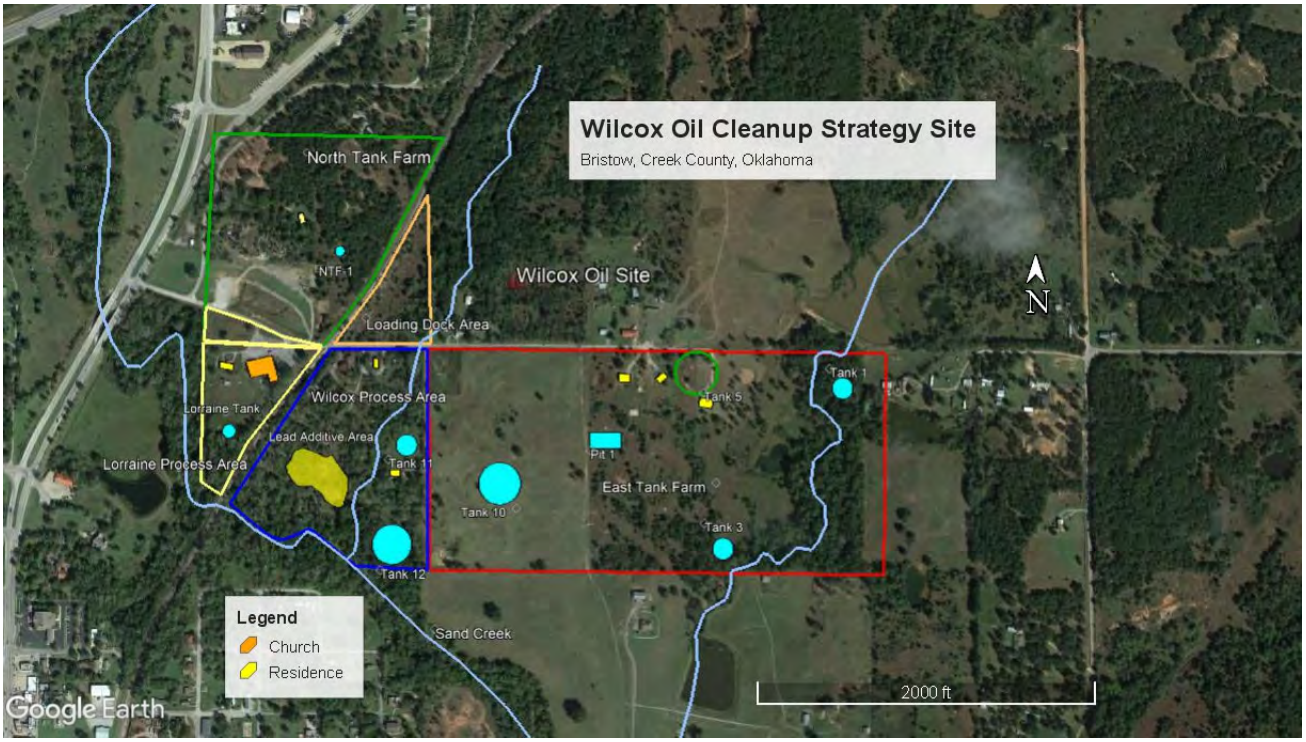


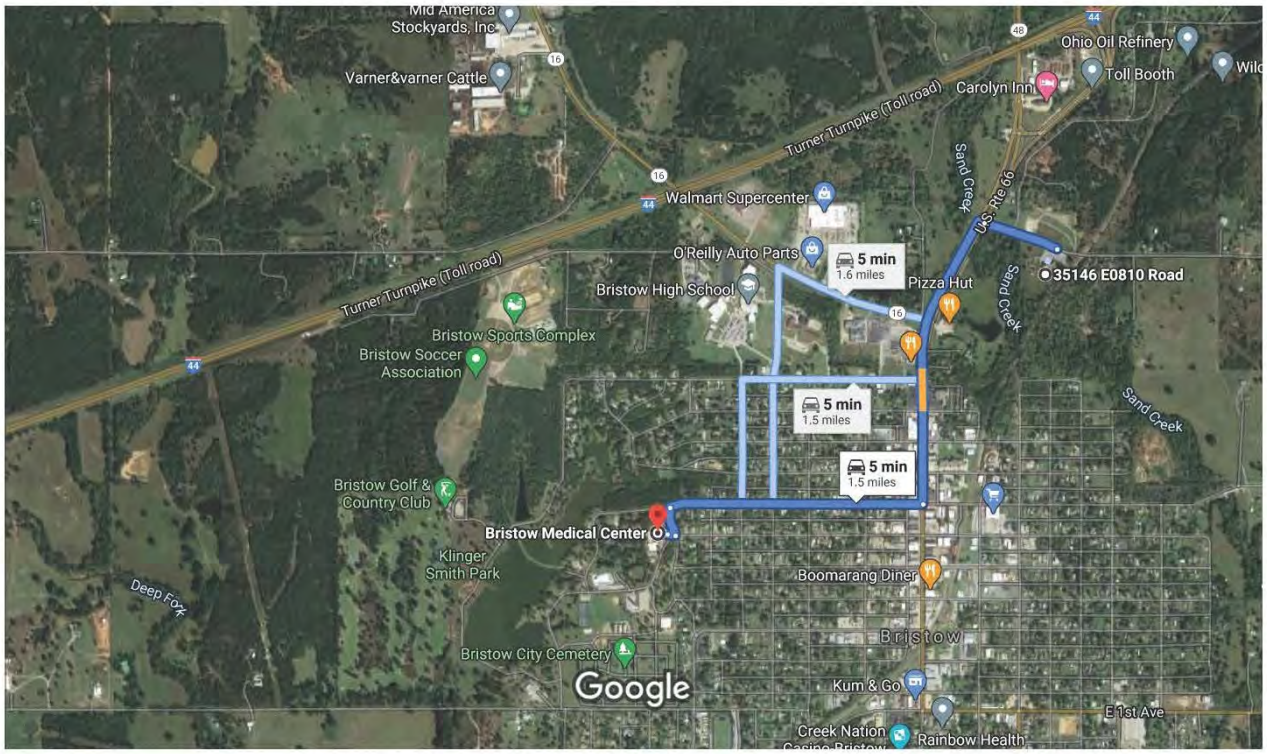
Figure 5: Tank Waste and Lead Additive Area Locations
North Tank Farm
Loading Dock
NTF 1
East Tributary
Lorraine Tank
Lorraine process area
Wilcox process area
East Tank Farm
Sand Creek
Site in Sec 20&29-16N-9E
Creek County
1"= 660' 7/8/1956
0 330 660 1,320 Feet
Legend:
Blue Areas Tank waste
Yellow Area lead additive area
Orange Area residential home
Green Area removal action
Boundaries are approximate
N
©AERIAL OKLAHOMA


NORTH TANK FARM (NTF) 1
(SEE DRAWING C-102)
LORRAINE TANK AREA
(SEE DRAWING C-103)
LEAD REMOVAL AREA
(SEE DRAWING C-104)
TANK 10 & PIT 1
(SEE DRAWING C-106)
TANK 11 & TANK 12
(SEE DRAWING C-105)
TANK 1 & TANK 3
(SEE DRAWING C-107)
C 12th AVE
C 11th AVE
WILCOX OIL SUPERFUND SITE
SOURCE CONTROL OPERABLE UNIT REMEDIAL ACTION
REMEDIAL DESIGN
DEMOLITION, CLEARING, AND SITE ACCESS - KEYMAP
EPA
EA Engineering, Science, and Technology, Inc., PBC
C-101


Wilcox Oil Cleanup Strategy Site
Bristow, Creek County, Oklahoma
North Tank Farm
NTF 1
Wilcox Oil Site
Loading Dock Area
Wilcox Process Area
Lorraine Tank
Lead Additive Area
Lorraine Process Area
Tank 11
Tank 10
Tank 12
Pit 1
East Tank Farm
Tank 5
Tank 1
Tank 3
N
Legend
Church
Residence
Sand Creek
2000 ft
Google Earth

Hospital Route Map

Google Maps 35146 E0810 Rd, Bristow, OK 74010 to Bristow Medical Center Drive 1.5 miles, 5 min



35146 E0810 Rd

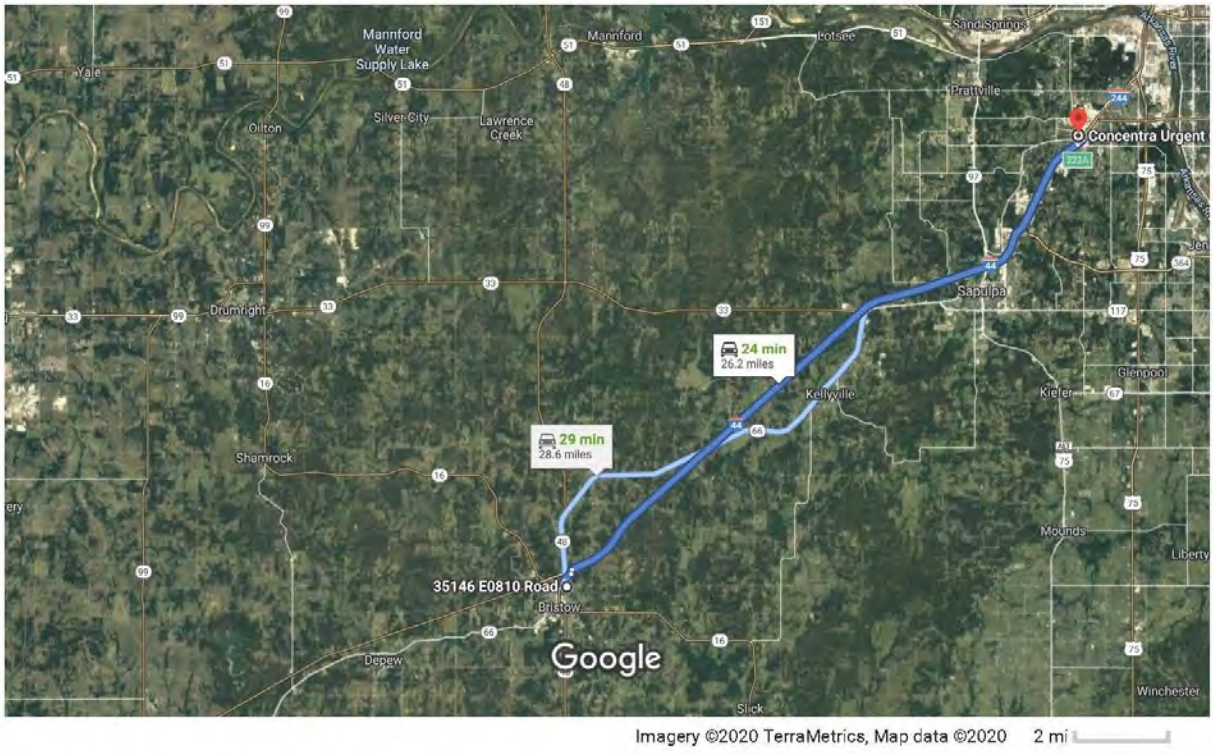
Bristow, OK 74010

1. Head northwest on E0810 Rd toward McDonald Dr — 0.2 mi
2. Turn left onto N Main St/U.S. Rte 66 — 0.7 mi
3. Turn right onto W 8th St — 0.6 mi
4. Turn left onto N Spruce St — 341 ft
5. Sharp right at W 7th Ave — 95 ft
6. Slight right
   Destination will be on the right — 69 ft

Bristow Medical Center

Clinic Route Map

Google Maps 35146 E0810 Rd, Bristow, OK 74010 to Concentra Urgent Care — Drive 26.2 miles, 24 min



35146 E0810 Rd
Bristow, OK 74010

Get on I-44 E

2 min (0.8 mi)

1. Head northwest on E0810 Rd toward McDonald Dr

0.2 mi

2. Turn right onto N Main St/U.S. Rte 66

0.1 mi

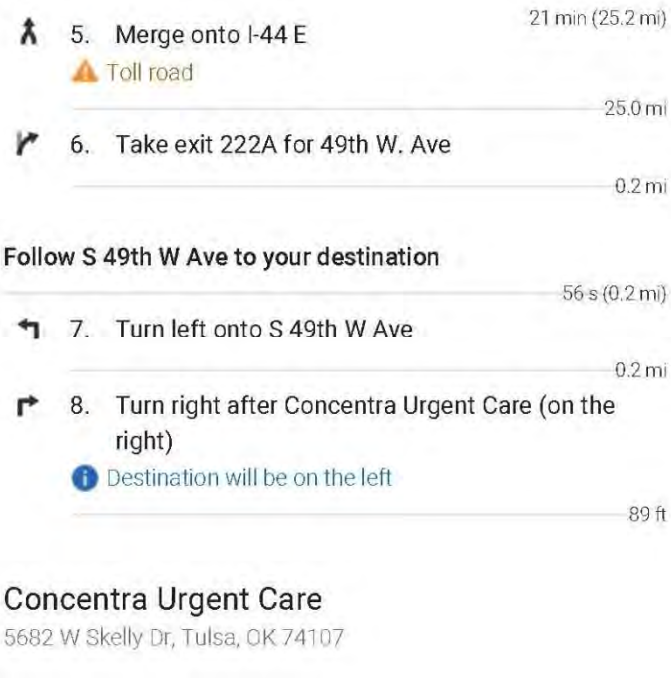
3. Use the right lane to take the ramp to Turnpike
   Toll road

0.3 mi

4. Keep right at the fork, follow signs for Tulsa and merge onto I-44 E
   Toll road

0.2 mi

Follow I-44 E to S 49th W Ave in Sapulpa. Take exit 222A from I-44 E



5. Merge onto I-44 E — 21 min (25.2 mi)
Toll road
25.0 mi
6. Take exit 222A for 49th W. Ave
0.2 mi

Follow S 49th W Ave to your destination

56 s (0.2 mi)
7. Turn left onto S 49th W Ave
0.2 mi
8. Turn right after Concentra Urgent Care (on the right)
Destination will be on the left
89 ft

Concentra Urgent Care
5682 W Skelly Dr, Tulsa, OK 74107

Attachment C

Chemical Inventory List / Chemical Hazard

Chemical Inventory List (to be amended as chemicals are brought to the site):
SDS shall be located in the site binder and available for all chemicals listed)

1. Gasoline
2. Diesel Fuel
3. Marking Paint
4. Grease
5. Hydraulic Oil
6. Free Flow 100® - Lead Stabilization Amendment

Attachment D

Activity Hazard Analysis

Activity Hazard Analysis		
Job Task: Site Set-up		
Personal Protective Equipment: Level D w/ air monitoring where necessary		
Hazard	**Sources**	**Control Measures**
Ergonomics	Lifting and bending	- Follow HS-36 Proper Lifting Techniques - Use Buddy system - Use mechanical means when feasible
Heat /Cold	Hot / Cold Temperatures	- Cool break areas - ER SOP HS-17 Heat Stress Safety - Cool/shaded break areas shall be provided - ER SOP HS-05 Cold Stress - Workers must maintain proper hydration - Biological monitoring
Struck by/caught between	Heavy Equipment/Traffic	- Only qualified operators permitted to operate - Follow HS-10 Motor Vehicle Operation - Follow HS-18 Heavy Equipment Operation - Wear ANSI Class 2 high-visibility safety vest - Avoid walking between equipment and stationary objects - Wear seat belts while in operation - Back up alarms functional and loud enough to hear over surroundings - Stay out of swing radius when in operation - Utilize spotters when backing
Noise	Heavy Equipment	- Hearing protection for levels > 85 dBs - Hearing protection required when operating open-cab equipment - Hearing protection required when working near equipment
Fire	Flammables	- Fire extinguishers in equipment and trucks - Keep fuel away from ignition sources - Water truck on sites
Cuts/Punctures	Sharp Objects/ Small Tools	- Beware of sharp objects - Wear cut resistant gloves - Use safety utility knife - Use of Shoe shanks - Qualified personnel - Keep hands and feet clear
Slip/Trip/Fall	Uneven terrain/debris	- Keep area organized - Identify/mark hazards - Remove debris from walking/ working surfaces
Wildlife	Insect/Ticks/Spiders/Dogs/Snakes	- Beware of and Avoid contact - Notify supervisor immediately if stung/bitten - Use insect spray per manufacturer recommendations - Be aware of surroundings – don't walk against brush or rock outcrops where snakes hide

Activity Hazard Analysis		
Job Task: Clearing and Grubbing		
Personal Protective Equipment: Level D		
Hazard	**Sources**	**Control Measures**
Traffic related injury	Driving motor vehicles	- Follow HS-10 Motor Vehicle Operation - Adjust controls/mirrors prior to operation - Utilized defensive driving techniques.
Struck by/caught between	Vehicle & Equipment Operation	- Follow HS-10 Motor Vehicle Operation - Follow HS-18 Heavy Equipment Operation - Ensure outriggers are properly positioned for wheeled excavator/equipment - Only qualified drivers permitted to operate vehicles - Wear ANSI Class 2 high-visibility safety vest - Wear seat belts while in operation - Back up alarms functional and loud enough to hear over surroundings - Always approach heavy equipment from the front and make contact with operator
Ergonomics	Lifting and bending	- Follow HS-36 Proper lifting techniques - Use Buddy system - No individual lifting over 40 lbs. - Use mechanical means when feasible
Heat Stress	Work in protective garments	- Cool break areas - Follow ER SOP HS-17 - Plenty of Fluids & breaks
Noise	Heavy equipment Hand tools/chainsaw	- Hearing protection required at all times when working with tools generating sound above 85db - Hearing protection required when operation open-cab equipment, chainsaw - If you have to shout to be heard, use hearing protection
Fire	Electrical devices/service/sparks from tools (chainsaw)	- Fire extinguishers with at least a 3A:40B:C rating shall be placed in when working - Keep shovel close in forested or brushy areas for fire suppression
Electrocution	Power tools/equipment	- Inspect all power cords prior to use - Use GFCI on all connections - De-energize all circuits in building except for overhead lights and limited 110v receptacles. - Protect/elevate temporary power cords
Cuts/Punctures/Scrapes	Sharp Objects – Sheet Metal/ Nails/screws/knives/debris	- Beware of sharp objects - Wear cut resistant gloves - Use safety utility knife - Always cut away from body
Slip/Trip/Fall	Poor condition of building Insufficient lighting Uneven terrain/debris	- Energize overhead lighting and add temp lighting in poorly lit areas - Keep area organized - Identify/mark hazards - Remove debris from walking/ working surfaces
Cuts / Scrapes	Limbs / brush removal activity	- Wear snug fitting long sleeved shirt, eye protection, appropriate gloves
Cuts / Amputation	Chainsaw operations	- Follow manufacturers use guidelines - Use the following PPE**: CHAPS, HEARING PROTECTION, METAL MESH FACE SCREEN, CR GLOVES** - No overhead cutting - **START CHAINSAW WHILE IT IS ON THE GROUND, NO DROP STARTING** - When cutting, make sure no personnel are in front of the bar - Use CR gloves when sharpening chain
Wildlife	Insect/Ticks/Spiders/Dogs/Snakes	- Beware of and Avoid contact - Notify supervisor immediately if stung/bitten - Use insect spray per manufacturer recommendations - Be aware of surroundings – don't walk against brush or rock outcrops where snakes hide

Activity Hazard Analysis		
Job Task:	**Unloading Material / Placing Material (e.g. culverts, heavy objects)**	
Personal Protective Equipment:	**Level D**	
Hazard	**Sources**	**Control Measures**
Ergonomics	Lifting and Bending	- Proper lifting techniques / Buddy system - Use mechanical means when possible
Struck by/caught between	Back hoe, Excavator, Skid Steer Dump trucks Vehicle & Equipment Operation/Traffic	- Approach all equipment from the front, make sure operator acknowledges ground personnel presence - Eye Contact With Equipment Operator, Keep a Safe Distance, Site Awareness - Only qualified drivers permitted to operate vehicles - Wear ANSI Type 2 high-visibility safety vest - Wear seat belts while in operation - Back up alarms - Controlled Work Area - If you using slings or the like, inspect lifting devices, check strength ratings(sling and connecting devices), use lift plan - Use tag lines for control of material being lifted - Use a spotter
Electrical	Overhead Utility	- Equipment spotter - Maintain safe distance from electrical overhead
Punctures	Sharp Objects	- Beware of sharp objects / Wear CR gloves
Slips/Trips/Falls	Uneven Terrain Debris	- Identify/mark hazards - Remove debris from walking / working surfaces
Wildlife	Insect/Ticks/Spiders/Dogs/Snakes	- Beware of and Avoid contact - Notify supervisor immediately if stung/bitten - Use insect spray per manufacturer recommendations - Be aware of surroundings – don't walk against brush or rock outcrops where snakes hide

Activity Hazard Analysis		
Job Task: Truck Lining / Ladder Operations		
Personal Protective Equipment: Level C - Level D w/air monitoring justification		
Hazard	Sources	Control Measures
Exposure to site contaminants	Asbestos	- Controlled work area - Utilize PPE per Section 6.0 of this HASP - Keep material damp to prevent blowing
Heat Stress	Use of protective coveralls Weather Temperatures	- Follow HS-17 Heat Stress SOP - Schedule proper breaks - Maintain communication/observation of co-worker - Cool break area - Proper hydration
Slip/Trip/Fall	Uneven terrain/debris Excavations	- Identify/mark hazards - Remove debris from walking / working surfaces - Cover/fill in holes - Check surfaces for debris, water, slippery spots - Do not walk on liner inside truck bed, move cautiously if necessary
Struck by/against	Trucks	- Follow HS-18 Heavy Equipment Operation - Wear ANSI Type 2 high-visibility safety vest - Back up alarms functional and loud enough to hear over surroundings - **Prior to ladder placement, truck wheels must be CHOCKED! Truck brakes set, and engine shutoff.**
Ergonomics	Lifting ladder into truck	- Follow HS-36 Proper Lifting Techniques - Two person operation minimum - One person in control giving direction - Lift ladder with bent hooked section toward truck tailgate, - Lift ladder over tailgate and hook in place - One person climbs ladder while the other holds it in place - Use mechanical means when feasible - Never carry material up ladder – always hoist - Utilize 3 points of contact when climbing at all times - Move slow and deliberate
Public Exposure	Local Personnel	- Control work areas - Communication
Cuts/Punctures	Sharp Objects	- Beware of sharp objects - Wear cut resistant gloves

Activity Hazard Analysis		
Job Task: Excavation of Petroleum Impacted Soil		
Personal Protective Equipment: Level C / Level D with Air Monitoring Justification		
Hazard	**Sources**	**Control Measures**
Petroleum / SVOC	Contaminated soils/insulation/surfaces	- Utilize proper PPE per section 6 of this HASP to include Breathable disposable coveralls (Dupont Tyvek or equivalent) and air purifying respirator with P100 cartridges - Avoid contact and disturbance of debris/material - Implement proper decontamination procedures per section 10 - Air monitoring according to HS-01
Ergonomics	Lifting and bending	- Follow HS-36 Proper Lifting Techniques - Use Buddy system - Use mechanical means when feasible
Heat/Cold Stress	Excessive heat/cold Lack of air flow	- Cool/Warm break areas - Follow ER SOP HS-05 Cold Stress - Follow ER SOP HS-17 Heat Stress Safety - Cool/shaded break areas shall be provided - Workers must maintain proper hydration
Struck by/caught between	Heavy Equipment	- Only qualified operators permitted to operate - Follow HS-10 Motor Vehicle Operation - Follow HS-18 Heavy Equipment Operation - Wear ANSI Type 2 high-visibility safety vest - Avoid walking between equipment and stationary objects - Wear seat belts while in operation - Back up alarms functional and loud enough to hear over surroundings - Stay out of swing radius when in operation
Noise	Heavy Equipment	- Hearing protection for levels > 85 dBs - Hearing protection required when operating open-cab equipment - Hearing protection required when working near equipment
Fire	Flammables	- Fire extinguishers in equipment and trucks - Keep fuel away from ignition sources - Water truck on sites
Cuts/Punctures	Sharp Objects - Nails/screws	- Beware of sharp objects - Wear cut resistant gloves - Use safety utility knife - Use of steel shanks
Slip/Trip/Fall	Uneven terrain/debris	- Keep area organized - Identify/mark hazards - Remove debris from walking/ working surfaces
Wildlife	Insect/Ticks/Spiders/Dogs/Snakes	- Beware of and Avoid contact - Notify supervisor immediately if stung/bitten - Use insect spray per manufacturer recommendations - Be aware of surroundings – don't walk against brush or rock outcrops where snakes hide

Activity Hazard Analysis		
Job Task:	**Soil Treatment with Lime (Material Handling (CaO))**	
Personal Protective Equipment:	Level C	
Hazard	**Sources**	**Control Measures**
Ergonomics	Lifting and bending	- Follow HS-36 Proper Lifting Techniques Buddy system/Proper lifting techniquesNo individual lifting over 40 lbs.
Struck by/against	Heavy Equipment unloading and moving totes	- Experienced operators - Controlled work area - Wear ANSI Class 2 high-visibility safety vest - Back up alarms - Approach equipment from the front, make sure operator acknowledges - you(communication – radio, hand signals) - Traffic Plan or route designation if necessary - Utilize spotters
Chemical Burns	Handling Lime (CaO)	- Use of proper PPE including chemical resistant gloves, face shields/respirator,apron or Saranex suit / equivalent (see section 6 PPE)
Chemical Burns / Release	Wind Drift	- Always work upwind to downwind - Keep material as close to the ground surface as possible to lessen airborne material - Spread material slowly
Noise	Heavy Equipment	- Hearing protection required when operating open-cab equipment Hearing protection required when working near equipment
Fire	Electrical devices/service	- Fire extinguishers with at least a 3A:40B:C rating shall be placed in when working
Electrocution	Power tools/equipment	- Mark and utilize spotters when working near overhead power lines - Inspect all power cords prior to use - Use GFCI on all connections
Cuts/Punctures	Sharp Objects – Sheet Metal/Nails/screws	- Beware of sharp objectsWear cut resistant glovesUse safety utility knifeAlways cut away from body
Slip/Trip/Fall	Uneven terrain/debris	- Stay out of unsafe buildings Keep area organized Identify/mark hazards - Remove debris from walking/ working surfaces
Wildlife	Insect/Ticks/Spiders/Dogs/Snakes	- Beware of and Avoid contact - Notify supervisor immediately if stung/bitten - Use insect spray per manufacturer recommendations - Be aware of surroundings – don't walk against brush or rock outcrops where snakes hide

Activity Hazard Analysis		
Job Task: Trucking Operations – Hauling Contaminated Debris / Water Truck operations		
Personal Protective Equipment: Level D		
Hazard	**Sources**	**Control Measures**
Struck by/against	Dump//Water Truck Operation	- Ensure equipment has back-up alarms - Maintain and adjust mirrors properly - Do not exceed posted speed limits - Observe posted heavy truck traffic signs - Follow established haul roads - Wear seatbelts when operating - Keep cabs clear of debris - Perform daily inspection/maintenance - Utilize spotters when necessary
Asbestos Exposure	Contaminated soils/insulation	- Drivers must remain in cab of truck at all times during loading and unloading - Windows shall remain closed and air conditioning in recirculation mode while loading and unloading - All loaded trucks shall be tarped per plan - Water spray shall be used for dust suppression
Mechanical failure	Dump//Water Truck Operation	- Perform daily inspection/maintenance of trucks - Perform required maintenance - Turn in to level area if available if brake failure - All trucks equipped with air brakes that will automatically lock up if air pressure failure
Slip/Trip/Fall	Ingress/Egress of trucks	- Maintain 3-point contact when entering/exiting cab of truck - Remove excess debris from footwear prior to entering cab of truck
Fire	Fueling Operations/ Flammable Liquids	- All fuel tanks/trucks will be grounded and bonded during fueling operations - Smoking and open flames are not permitted in fueling/greasing areas - All equipment will be equipped with 10 lbs. ABC type, multi-purpose fire extinguishers
Pressure Washer Operation	Laceration/abrasion by high pressure water stream	- Proper instruction on safe use of pressure washers will be conducted - Operators will not fix the hand trigger in the open position such that if the wand were left unattended, water would spray from the tip - Pressure washers shall not be left running unattended - Pressure hoses will be inspected prior to use
Emergency/weather event	Severe Thunderstorm	- Establish rally points at locations site locations - Shelter in place - Continue work after sufficient waiting period.
Spill	Fueling Operation	- Spill and absorbent materials will be readily available - Employees will be instructed on proper fueling operations - Fueling operation must be attended at all times

Activity Hazard Analysis		
Job Task: Outside support		
Personal Protective Equipment: Level D		
Hazard	**Sources**	**Control Measures**
Ergonomics	Lifting and bending	- Follow HS-36 Proper Lifting Techniques - Use Buddy system - Use mechanical means when feasible
Heat/Cold Stress	Excessive heat/cold	- Cool/Warm break areas - Follow ER SOP HS-05 Cold Stress - Follow ER SOP HS-17 Heat Stress Safety - Cool/shaded break areas shall be provided - Workers must maintain proper hydration
Struck by/caught between	Heavy Equipment	- Only qualified operators permitted to operate - Follow HS-10 Motor Vehicle Operation - Follow HS-18 Heavy Equipment Operation - Wear ANSI Class 2 high-visibility safety vest - Avoid walking between equipment and stationary objects - Wear seat belts while in operation - Back up alarms functional and loud enough to hear over surroundings - Stay out of swing radius when in operation
Noise	Heavy Equipment	- Hearing protection for levels > 85 dBs - Hearing protection required when operating open-cab equipment - Hearing protection required when working near equipment
Fire	Flammables	- Fire extinguishers with at least a 3A:40B:C rating shall be placed in all equipment - Fire truck placed in fueling areas - Eliminate ignition sources
Cuts/Punctures	Sharp Objects - Nails/screws Cutting vacuum hose	- Beware of sharp objects - Wear cut resistant gloves - Use safety utility knife - Use of steel shanks Always cut away from body
Slip/Trip/Fall	Attic Structure/roof trusses Uneven terrain/debris	- Install proper flooring/use work boards in attics - Keep area organized - Identify/mark hazards - Remove debris from walking/ working surfaces
Wildlife	Insect/Ticks/Spiders/Dogs/Snakes	- Beware of and Avoid contact - Notify supervisor immediately if stung/bitten - Use insect spray per manufacturer recommendations - Be aware of surroundings – don't walk against brush or rock outcrops where snakes hide

Activity Hazard Analysis		
Activity: Restoration of Properties		
Personal Protective Equipment: Level D		
Hazard	**Sources**	**Control Measures**
Cuts/Punctures	Sharp Objects – Sheet Metal/ Nails/screws	Beware of sharp objects Wear cut resistant gloves Use safety utility knife Always cut away from body
Ergonomics	Lifting and Bending	Follow HS-36 (Proper lifting techniques) Use Buddy system No individual lifting over 40 lbs. Use mechanical means when feasible
Heat Stress / Cold Stress	Temperature Extremes	Cool / Warm break areas Review and adhere to ER SOP HS-17 and ER SOP HS-05 Plenty of fluids & breaks
Noise	Equipment/vehicles Hand tools	Hearing protection required at all times when working with tools generating sound above 85db Hearing protection required when operation open-cab equipment If you have to shout to be heard, use hearing protection
Slips/Trips/Falls	Uneven Terrain Debris	No running onsite Keep area organized Identify/mark hazards Remove debris from walking/ working surfaces
Electrocution	Overhead utilities	Locate and mark existing energized lines – Local locate company Disconnect/de-energize electrical lines if possible Use spotter at all time during operations near overhead lines Boot lines or use hot stick to move line out of reach of equipment
Struck by/caught between	Vehicle & Equipment Operation/Traffic	Follow HS-10 Motor Vehicle Operation Follow HS-18 Heavy Equipment Operation Only qualified drivers permitted to operate vehicles Wear ANSI Type 2 or 3 high-visibility safety vest Wear seat belts while in operation Back up alarms functional and loud enough to hear over surroundings Avoid walking between operating equipment and stationary objects Keep equipment windows and mirrors clean Barricade and post signs to prevent entry into work area Approach equipment from the front and wait for operator acknowledgement
Traffic Control	Motor Driven Vehicles	If traffic control personnel need to wear high visibility traffic vest Stop signs and slow traffic signs will also be used as necessary Work zones will be marked with men working sign and trucks entering and leaving if needed. Safety cones will be use marking parked vehicles

Attachment E

Benzene Safety Guidelines

	Employee Health and Safety Policy Manual	Procedure #:	**HS-39**
		Page:	**63 of 2**
	Subject:	Revision:	**04**
	Benzene Safety Guideline	Issue Date:	**May 5, 2015**

1. GENERAL

This safety guideline is intended to provide suitable information to all Environmental Restoration LLC employees regarding the potential toxic effects of Benzene so that adequate measures can be taken to limit exposures through controls in the workplace. All work involving Benzene shall be done in accordance with 29 CFR 1910.1028. This guideline will be referenced in the site specific Health and Safety Program (HASP) when there is a potential for Benzene exposure. The site specific HASP and associated Benzene program is available to the Assistant Secretary, the Director, and all affected ER employees assigned to the project.

Of all the hydrocarbons, Benzene poses the most serious long-term threat. Exposure over time, to even low levels of Benzene can cause leukemia, blood changes and aplastic anemia.

2. CHARACTERISTICS

Benzene is a colorless to light-yellow liquid with a pleasant sweet odor.

- Formula (C6H6)
- CAS No.: 71-43-2

Benzene is a flammable liquid that can accumulate static electricity. Benzene vapors are heavier that air and may travel to a source of ignition and flash back. The vapors are readily dispersed by wind movement and/or air currents. Liquid benzene tends to float on water and may travel to a source of ignition and spread fire. Benzene is highly reactive with no oxidizing materials.

3. USES

Benzene is a component of gasoline, both in the manufacturing process and found naturally in crude oil; Benzene is also used as a feed stock for chemical manufacturing.

4. HEALTH EFFECTS

WARNING - Benzene is a cancer-causing agent in humans. All contact should be reduced to the lowest possible level. The above exposure limits are for air levels only. Skin contact may also cause overexposure.

Benzene is one of the most hazardous of all petroleum products because of its adverse health hazards and high flammability.

The following adverse health effects are important to remember where there may be a potential exposure to Benzene:

a) **Acute:** At high concentrations (1000 PPM) Benzene has an acute effect on the central nervous systems causing headaches, dizziness, drowsiness, unconsciousness, and possible death.

Acute exposure can also cause breathlessness, irritability, and giddiness.

b) **Chronic:** Benzene has the chronic exposure effect on bone marrow (aplastic anemia leukemia).

Chronic exposure can also cause convulsions, liver damage, heart damage, blood diseases (aplastic anemia), and cancer (leukemia). These symptoms can take months or years to surface and can develop without physical or visible indications.

c) Repeated skin contact leads to irritant contact dermatitis (rash); as with any petroleum solvent (which Benzene is also classified as), it will leach the natural oils out of the skin. Direct contact with the skin can cause erythema and/or blistering.

d)

e) Benzene is irritating to eyes and mucous membranes.

f) Flammable/dangerous fire risk: benzene has a very low flash point making it dangerous to have any open flame, spark or source of ignition when vapors are present.

g) Explosive limits in air 1.5 to 8% by volume: benzene is highly flammable at low levels of vapor quantity in air.

5. PERSONAL PROTECTIVE MEASURES

ER employees are not permitted to work in areas where there may be a potential for benzene exposure without proper personal protective equipment (PPE). It is the responsibility of the Project Manager and the Site Health and Safety Officer to see that any jobsite that may expose employees to benzene has been properly assessed prior to entry.

Minimum PPE requirements where benzene exposure is possible include chemical protective coveralls, chemical protective boots or boot covers, chemical protective gloves, eye and face protection.

Where airborne benzene levels may exceed the action level a minimum of NIOSH-approved full face air-purifying respirator equipped with organic vapor (OV) cartridges shall be used.

Benzene liquid is highly flammable and vapors may form explosive mixtures in air. Fire extinguishers must be readily available in areas where benzene is used or stored.

Employees should be aware of owners' contingency plans and provisions. Employees must be informed where benzene is used in the host facility and aware of additional plant safety rules.

6. GENERAL SAFETY REQUIREMENTS

- Smoking in areas where benzene is used/store is prohibited
- Eating in areas where benzene is used/stored is prohibited

7. SPECIAL REQUIREMENTS

If it is necessary to perform any work where the exposure to Benzene is about the OSHA acceptable limits, then ER shall develop a site specific health and safety plan that includes special elements of exposure monitoring, formal medical program, special personal protective equipment, etc in accordance with 29 CFR 1910.1028.

8. TRAINING

All employees will be provided awareness training in this program, in order to be familiar with the potential hazards and proper safe work procedures to follow if exposed to this health hazard.

Attachment F

Lead Safety Program

ENVIRONMENTAL RESTORATION	**Employee Health and Safety Policy Manual**	Procedure #:	**HS-48**
		Page:	**Page 66 of 9**
	Subject:	Revision:	**05**
	Lead Hazard Safety Program	Issue Date:	**October 29, 2019**

LEAD HAZARD TRAINING COURSE OUTLINE

I. Federal OSHA Lead Construction Standard (29 CFR 1926.62)

A. Scope

1. All construction work involving exposure to lead, including:

   a) Demolition or salvage
   b) Removal or encapsulation of lead materials
   c) New construction
   d) Transportation, disposal, and storage of lead materials.
   e) Maintenance operations
   f) Lead contamination/emergency cleanup

B. Exposure Limits

1. The PEL is 50 micrograms of lead per cubic meter of air averaged over an 8-hour period.
2. The Action Level (AL) is 30 micrograms of lead per cubic meter of air averaged over an 8-hour period.
3. If respirators are used, actual exposures will be calculated by applying protection factor of respirator to air monitoring results.

C. Exposure Assessment

1. Employer must determine if lead exposures are at or above AL.
2. Exposure assessment will be made by collecting personal samples representative of a full shift for each job classification.
3. Until exposure assessment is completed, it will be assumed that worker exposures are >PEL but < 10 times PEL. Therefore, respirators and protective clothing will be worn during assessment period*.

   ** When site characterization and similar project site histories with engineering controls that have been documented to prevent respirable particle creation, and proven to be effective in keeping constituents of concern below action levels, level D PPE may be utilized during startup and sampling events when approved by ER PHSM and VP, Health & Safety.*

4. Workers will also receive baseline blood tests for lead and be provided with appropriate training, hand washing facilities, and change areas.
5. If exposure results are below AL, no further monitoring will be conducted unless site operations change.
6. If exposure results are above AL but below PEL, monitoring will be repeated every six months.
7. If exposure results are above PEL, monitoring will be repeated quarterly.

Within 5 working days after completion of exposure assessment, each worker will be informed in writing of their monitoring results.

D. Method of Compliance

1. The employer shall implement engineering and work practice controls, including administrative controls, to reduce and maintain employee exposure to lead to or below the permissible exposure limit to the extent that such controls are feasible.

E. Respiratory Protection

1. Respirators will be used whenever employee exposure to lead exceeds the PEL.
2. Employees who use respirators will be fit tested initially and 6 months thereafter.

F. Protective Clothing and Equipment

1. Employees will wear protective clothing in areas where exposures exceed the PEL. This clothing will be provided at no cost (free) to the employee. Protective clothing will be properly removed, repaired, disposed of. If laundered, protective clothing shall be in clean and dry condition at least weekly.
2. PPE shall include, at a minimum; hardhat, safety-toed boots, cut-resistant gloves, and safety glasses. Additional PPE that may be required based on site-specific conditions include disposable coveralls, respiratory protection, disposable boot covers, and disposable gloves.

G. Housekeeping

1. All surfaces shall be maintained as free as practicable of accumulations of lead.
2. Compressed air, by itself, shall not be used to remove lead from surfaces.

H. Hygiene Facilities and Practices

1. In areas where lead exposure levels are above the PEL:

    a. No food, beverage, or tobacco products will be allowed.
    b. Workers must wash hands before leaving site.
    c. Workers must change clothing in designated change areas
    d. Where feasible, workers should also shower before leaving site.

I. Medical Surveillance

1. Employees who are exposed to lead above AL for more than 30 days a year must participate in a medical monitoring program. Initial medical surveillance, consisting of blood lead testing, will also be made available to workers exposed at or above the AL.
2. For lead exposure above AL for 30 days or more a year, biological monitoring must be conducted every 2 months or the first 6 months and every 6 months thereafter.
3. Biological monitoring will be repeated every 2 months for workers who have blood lead levels at or above 40 micrograms per deciliter.
4. For employees who are removed from exposure due to elevated blood lead levels (> 50 micrograms per deciliter), they will be re-tested within 2 weeks after receiving test results and every month thereafter during removal period.
5. Employees will be notified of their blood level results within 5 days of receiving monitoring results.
6. Employees whose blood levels exceed 40 micrograms per deciliter will be informed of the medical removal criteria of 50 micrograms per deciliter.
7. Employees who are exposed to lead above its action level for 30 days or more per year and who have blood lead levels above 40 micrograms per deciliter, will be offered medical exams at least annually or whenever exposure symptoms appear.

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J. Chelation

1. The employer shall ensure that any person whom he retains, employs, supervises or controls does not engage in prophylactic chelation of any employee at any time.
2. If therapeutic or diagnostic chelation is to be performed, the employer shall assure that it be done under the supervision of a licensed physician in a clinical setting.

K. Medical Removal Protection

1. Employees who are exposed to lead above its action and who have blood lead levels at or above 50 micrograms per deciliter or who have a medical condition which places them at increased risk of health impairment from this exposure, will be removed from their lead exposure work.
2. Employees who were removed from work due to elevated blood lead levels will be returned to their job when tests indicate that their blood lead level is at or below 40 micrograms per deciliter.
3. Employees who are removed from their jobs for the reasons mentioned above or who are removed voluntarily will retain their normal earnings, seniority, and other employment rights and benefits during the time of their removal, up to a maximum of 8 months, provided by the employer.

L. Employee Information and Training

1. Prior to starting work, and annually thereafter, employees must be trained in the following topics:
   a) Content of this standard, including appendices A and B
   b) Site activities that could result in lead exposures above action level
   c) Purpose, selection, fitting, use, and limitation of respirators
   d) Description of medical surveillance program and health effects from lead exposure
   e) Engineering and work practice controls
   f) Contents of compliance plan
   g) Chelating agent precautions
   h) Employee rights to records and information

M. Signs

1. Lead warning signs must be posted at the job site Hazard Communications board with AHA information.

N. Recordkeeping

1. Detailed exposure monitoring and medical surveillance records will be maintained on each employee covered by these requirements. These records will be maintained by the employer for 30 years and will be made available to the employee upon request.

II. Respirator Usage

A. Purpose

1. Respirators will be worn to ensure that personnel exposures to lead do not exceed permissible exposure limits during the eight-hour work shift. The use of respirators will be discontinued if it can be shown through personal exposure monitoring that airborne lead levels are below permissible limits. Respiratory protection will also be provided to employees who request it.

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B. Selection

Full-face air purifying respirators equipped with P100 dust cartridges will be worn during those phases of work requiring the use of respiratory protection. Only National Institute for Occupational Safety and Health (NIOSH) approved respirators will be used and each user will be given a respirator of a size and brand that fits well and operates properly. Each user will be fit-tested when issued a respirator to ensure a proper fit.. There are two types of fit tests: qualitative and quantitative.

Qualitative fit testing is a pass/fail test method that uses your sense of taste or smell, or your reaction to an irritant in order to detect leakage into the respirator facepiece. Qualitative fit testing does not measure the actual amount of leakage. Whether the respirator passes or fails the test is based simply on you detecting leakage of the test substance into your facepiece. There are four qualitative fit test methods accepted by OSHA:

- Isoamyl acetate, which smells like bananas;
- Saccharin, which leaves a sweet taste in your mouth;
- Bitrex, which leaves a bitter taste in your mouth; and
- Irritant smoke, which can cause coughing.

Quantitative fit testing uses a machine to measure the actual amount of leakage into the facepiece and does not rely upon your sense of taste, smell, or irritation in order to detect leakage. The respirators used during this type of fit testing will have a probe attached to the facepiece that will be connected to the machine by a hose. There are three quantitative fit test methods accepted by OSHA:

- Generated aerosol;
- Ambient aerosol; and
- Controlled Negative Pressure.

Quantitative fit testing can be used for any type of tight-fitting respirator.

If dust conditions require an upgrade of respiratory protection, respirators with higher protection factors will be selected and issued to site workers.

C. Fitting

Each employee will be fit-tested in their respiratory protective equipment using irritant smoke prior to starting work. A record of their fit-test results will be maintained at the job site. This fit-test will be repeated for each new brand, size, and type of respirator used and whenever conditions change that could alter the fit of the respirator. All employees must be clean shaven when wearing a respirator.

D. Use

Respirators will be worn in all controlled work areas where lead dust levels exceed an airborne concentration of 50 micrograms per cubic meter of air. Respirators will be cleaned and disinfected at the end of each shift and placed in plastic bags for storage. Respirators are not to be taken off in controlled work areas nor are they to be placed on contaminated surfaces. A negative pressure check must be conducted on the respirator each time it is worn. Prior to donning this equipment, the respirator must be inspected to ensure it is clean, in good condition and is in working order. Cartridges must be replaced at the end of each shift or whenever breathing resistance through the cartridges becomes too difficult.

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E. Limitations

Full-face air purifying respirators equipped with P100 cartridges are not to be worn in oxygen deficient atmospheres (< 19.5% O_2). Proper face-piece seal is critical; therefore, all employees wearing respiratory protective equipment must be clean shaven. Medical approval is required to wear a respirator and a record of such will be kept at the job site. As mentioned above, cartridges must be replaced at the end of each shift or whenever breathing becomes difficult. Equipment must be inspected before and after each use.

III. Medical Surveillance

Each employee working in controlled work areas will be required to complete an annual medical exam consisting of a history, physical exam, and laboratory tests to ensure fitness for duty. Blood lead evaluations will also be required for participation in this project. In addition, exposure monitoring will be conducted on representative site workers to evaluate compliance with required exposure limits. Test results will be maintained by ER for a minimum of 30 years. Copies of these test results will be available to each employee upon request.

If blood lead results exceed 50 micrograms per deciliter or if medical exam results identify a condition that would pose an unacceptable risk of injury to the employee from exposure to lead, the employee will be removed from lead exposure activities as per 29 CFR 1926.62(k). If chelation therapy is required to ameliorate high blood lead levels, this treatment will only be conducted under the direction of a licensed physician.

IV. Engineering Controls and Work Practices

Work will be conducted in accordance with the work plans for this project. The HASP describes the engineering and work practice controls that will be used to eliminate or reduce the risk of injuries during all phases of work. All site employees will be required to review and sign this document before starting work.

The main lead exposure hazard associated with this project consists of breathing lead contaminated dust that may become airborne when the soils on site are excavated. Lead exposures can also occur if lead contamination gets into your mouth and is swallowed, such as when one handles food, cigarettes, chewing tobacco, or make-up that has lead on them or when one handles these items with hands contaminated with lead.

Personal lead exposures will be controlled through the use of PPE (protective clothing and respirators) and through proper decontamination practices. Efforts will also be made during excavation to control dust emissions by using water spray to knock down dust.

V. Health Effects from Toxic Exposures

Lead is a potent, systemic poison that affects a variety of organ systems, including the nervous system, kidneys, reproductive system, blood formation, and gastrointestinal system. The most important way lead enters the body is through inhalation, but it can also be ingested when lead dust or unwashed hands contaminate food, drink, or cigarettes. Much of ingested lead passes through feces without absorption into the body. Adults may absorb only 2 to 15 percent of ingested lead; children may absorb a much larger fraction. Once in the body, lead enters the bloodstream and circulates to various organs.

Lead concentrates and remains in bone for many years. The amount of lead the body stores increases as

exposure continues, with possibly cumulative effects. Depending on the dose entering the body, lead can be deadly within several days or affect health after many years. Very high doses can cause brain damage (encephalopathy). Lead may aggravate nervous system disorders (e.g. epilepsy, neuropathies), kidney diseases, high blood pressure, infertility, and anemia. Lead-induced anemia and its effect on blood pressure can aggravate cardiovascular disease.

An acute, short-term dose of lead could cause acute encephalopathy with seizures, coma, and death. However, short-term exposures of this magnitude are rare. Reversible kidney damage, as well as anemia, can occur from acute exposure.

Symptoms of chronic, long-term overexposure include appetite loss, nausea, metallic taste in the mouth, lead line on gingival tissue, constipation, anxiety, anemia, pallor of the face and the eye grounds, excessive tiredness, weakness, insomnia, headache, nervous irritability, fine tremors, numbness, muscle and joint pain, and colic accompanied by severe abdominal pain. Paralysis of wrist and, less often, ankle extensor muscles may occur after years of increased lead absorption. Kidney disease may also result from chronic overexposure, but few, if any, symptoms appear until severe kidney damage has occurred.

Reproductive damage is characterized by decreased sex drive, impotence, and sterility in men; and decreased fertility, abnormal menstrual cycles, and miscarriages in women. Unborn children may suffer neurologic damage or developmental problems due to excessive lead exposure in pregnant women. Lead poisoning's severest result is encephalopathy manifested by severe headache, convulsions, coma, delirium, and possibly death.

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LEAD HAZARDS TRAINING COMPLETION RECORD

NAME: _____ ***EMPLOYEE #:*** _____
(Please print)

1. I have been informed about the health hazards associated with exposure to inorganic lead.
2. I have been informed about the types of work that may result in exposure to lead, and the necessary protective steps to prevent exposure, including engineering controls and safe work practices.
3. I understand the purpose for proper selection, use, and limitations of the respirators and protective equipment or clothing that will be required for this project.
4. I understand the purpose for good housekeeping and personal hygiene practices to prevent exposure to others.
5. I have been informed about the medical surveillance and medical removal protection program requirements associated with this project.
6. I have reviewed and signed the Site-Specific Health and Safety Plan which describes the health hazard controls that will be used to comply with the requirements of Federal OSHA's Lead Construction Standard for this project.
7. I have received of copy of Federal OSHA's Lead Construction Standard 29 CFR 1926.62 and have been informed of its contents.
8. I understand that chelating agents should not be used routinely to treat lead exposures.

SIGNATURE: _____ ***DATE:*** _____

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Lead Project Air Monitoring Requirements

Personal Air Monitoring

Personal Air Monitoring is used to evaluate the level of contaminants in the breathing zone of workers. Personal Air Monitoring data is required to determine proper respiratory protection and to justify allowing work without a respirator. All personal air monitoring will be scheduled through the PHSM. Only the PHSM has the right to waive or alter the frequency of personal air monitoring. If deviations are granted they must be reported to the Management Committee.

Initial Personal Air Monitoring Requirements
Personal air monitoring must be conducted at the startup of every site for a two-day period. This sampling event shall collect personal (breathing zone) samples representative of a full shift including at least one sample for each job classification (i.e. Labor, equipment operator, truck driver, etc.) in each work area either for each shift or for the shift with the highest exposure level.

Ongoing Project Personal Air Monitoring Requirements
A single day (full shift) air monitoring event, again carried out on each job classification, will be conducted every 60 days until project completion.

Changed Site Conditions Personal Air Monitoring Requirements
Personal air monitoring is used to determine worker exposure during daily, regular operations. When site conditions change the initial sampling episode may no longer be representative of a workers exposure. Personal sampling is required when site operations have been changed and the potential for worker exposure has changed.

It is the RM's and Site Health and Safety Officer's responsibility to notify PHSM when any such change occurs. This notification should occur prior to initiating the work. PHSM will then be responsible for developing and scheduling an air monitoring event that coincides with site work.

Air Sampling Data Management

All data air sampling will be included in the job files and the Health and Safety Department files.

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Lead Project Blood Lead/ZPP Testing Requirements

Worker Blood Lead/ZPP

Initial Blood Analysis Requirements;

All employees will receive an Initial Blood Lead/ZPP Analysis when assigned to any lead site. The Blood lead/ZPP should be taken prior to mobilization. If this option is not available, the blood lead/ZPP analysis must occur within 5 days of the employee arriving onsite. This applies to all employees regardless of length of assignment. If they are only onsite for 1 hour, they will need this initial blood lead. The PHSM is the only individual that is capable of waiving this requirement. Any such waiving of the requirement, and the reasoning behind it, must be disclosed to all managers via e-mail.

It is the RM's responsibility to ensure workers have received their blood sampling prior to, or within 5 days of mobilization. Lonnie can assist in locating local medical clinics for the projects.

Ongoing Blood Analysis Requirements*:*

All ongoing projects will conduct worker blood lead/ZPP sampling / analysis every 90 calendar days. This 90 day sample episode may be skipped if project demobilization is scheduled for less than 30 day from the 90 day sample date. *As example if the 90 day sample episode is scheduled for May 15, but staff demobilization is occurring June 10, the 90 day sampling can be skipped and replaced with Exit Blood Lead/ZPP Sampling.*

Exit Blood Analysis Requirements

At the end of a workers assignment on a job, an Exit Blood Lead/ZPP Analysis must be run unless the employee has been onsite less than 30 days and working in an area where the Action Level, (as documented by Personnel Air Monitoring Data specific to the site), has not been achieved. If you can't prove the employee was working in conditions below the Action Level using data from your site, you must have exit blood lead/ZPP analysis run for the employee regardless of their duration onsite.

Blood Lead/ZPP Data Management

All data for blood lead/ZPP data will be included in the job files and the Health and Safety Department files.

Attachment G

Site Specific Training Record

SITE-SPECIFIC TRAINING RECORD

This is to advise that _____ conducted a Site-Specific Training
(Instructor's name)

course for _____ at the
(Company Name)

68HE0620F0018 Wilcox Oil Company project on _____.
(TO #, Project Name) (Date)

The total duration of the instructions was _____ hours.

Instruction covered the topics checked off below:

- Site Location, Description and History ☐
- Potential site hazards (chemical, physical, and biological) ☐
- Chemical, physical, and toxicological properties of site contaminants ☐
- Safe work practices ☐
- Training requirements ☐
- Medical Surveillance ☐
- Control Zones ☐
- Monitoring ☐
- Selection, use, and limitation, of personal protective equipment ☐
- Personnel and equipment decontamination ☐
- Emergency response procedures ☐
- Hazard communication ☐
- Blood borne pathogen briefing ☐
- COVID 19 Reporting / Practice Review ☐

The following participant attended the training course for the full duration indicated above.

_____ _____
Name (Print) Signature

COVID -19 EMPLOYEE HEALTH SCREENING FORM

Project/Office Name: __Wilcox Oil Company__ **Person completing Form:**____________________________
Date:________________________ **Project Number:** ______WO6-18______

Screen each employee for symptoms before they start their shift. Circle an answer **(Y=YES, N=NO)** for each symptom for each employee.

If an employee reports **YES** for any of the symptoms:

1. Send employee home immediately
2. Instruct employee to contact 1Source COVID-19 number **(855-517-6872)** for Return to Work direction
3. Increase cleaning in your location to include office, vehicles, heavy equipment, and hand tools
4. Ensure staff are maintaining at least 6 feet distancing from one another

Other symptoms: Other less common symptoms have been reported, including gastrointestinal symptoms like **nausea, vomiting, or diarrhea**.

EMPLOYEE ID	EMPLOYEE NAME	BEFORE STARTING SHIFT							DESCRIBE OTHER SYMPTOMS
		Fever (100.4 or Greater)	Cough	Shortness of Breath / Difficulty Breathing	Chills	Muscle Pain	Sore Throat	Loss of Taste or Smell	
		Y N	Y N	Y N	Y N	Y N	Y N	Y N	
		Y N	Y N	Y N	Y N	Y N	Y N	Y N	
		Y N	Y N	Y N	Y N	Y N	Y N	Y N	
		Y N	Y N	Y N	Y N	Y N	Y N	Y N	
		Y N	Y N	Y N	Y N	Y N	Y N	Y N	
		Y N	Y N	Y N	Y N	Y N	Y N	Y N	
		Y N	Y N	Y N	Y N	Y N	Y N	Y N	
		Y N	Y N	Y N	Y N	Y N	Y N	Y N	
		Y N	Y N	Y N	Y N	Y N	Y N	Y N	
		Y N	Y N	Y N	Y N	Y N	Y N	Y N	
		Y N	Y N	Y N	Y N	Y N	Y N	Y N	
		Y N	Y N	Y N	Y N	Y N	Y N	Y N	
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		Y N	Y N	Y N	Y N	Y N	Y N	Y N	
		Y N	Y N	Y N	Y N	Y N	Y N	Y N	